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To study the prevalence of mental retardation in Puerto Rico, the proportional distribution of successful retardates, and the processes accounting for success and failure, a random sample of 4,771 adults between the ages of 23 and 49 was screened by the Stanford Binet Form L and a vocabulary test. From this sample, the estimated retardation rate for Puerto Rican adults was 31%. Success was measured by comparing the average income of male retardates with the incomes of other males in the same community; those in the lowest 20% were considered unsuccessful. The proportion of successful retardates was dependent on the complexity of the community; in peasant communities, 78% were successful while in urban non-slums this was reduced to 60%. Intelligence and education contributed to the probability of success, especially for those with IQ's of 85 or above; however, in urban areas retardates with 4 years or less of school had a failure rate of 50% while for those with more schooling the rate was 30%. Over 60% of respondents had a positive self image although normals and successful retardates showed more positive self images (p=.05). Most retardation resulted from cultural deprivation. (MK)

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THE SUCCESSFUL RETARDATE

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Lest the reader be bemused by the oddities of our pagination, let us hasten to explain that the present chapters I and II have been rewritten. We hope that the wider scope and improved clarity will repay the inconvenience of reading five page 10's and five page 18's.

Carlos Albizu-Miranda
Project Director

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As usual, the authors assume full responsibility for everyone's errors.

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Project Director

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CHAPTER I

The Jíbaro and the Psychologist: A Study in Contrasts

The present study started with the notion that the situation in Puerto Rico regarding retardation, and intelligence generally, was markedly different from that in the United States. The differences, in fact, did not seem to be mere variations due to accidental conditions, but rather seemed to reflect the results of on an entirely different way of looking at things.

In general, it is deceptively easy to state that a group's weltanshauung is totally different, while it is frustratingly difficult to convey the flavor of this way of life to readers who have not experienced it. It is, of course, still harder to leave the reader with the feeling that this other way of life really seems just as natural to people who share it as the reader's own view-point seems to him. Nevertheless, we will essay this task. To aid us, we ask the reader to accompany us on an imaginary trip to the center of Puerto Rico and listen with us to some real and invented conversation with the jíbaros. 1/

One of our interviewers has just finished giving a Stanford-Binet to a woman with a third grade education. He begins to make arrangements for interviewing her husband. The woman laughs: "Oh, you don't want to talk to my husband. Es un bruto". 2/ In another village, an interviewer is collecting data on the educational background of the respondent's family. None of the members has gone to school past the third grade. The implications of this fact seems to have struck the respondent for the first time. "My God!" he says, "Somos bestias. Todos son bestias aquí." 3/

Brutos, bestias, animales - these are the conventional terms used to describe stupidity. The habitual use of these metaphors is revealing. To the jíbaro, stupid people are not just like

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1/ A "jíbaro"is the Puerto Rican peasant, the rustic.

2/ "Es un bruto" is literally "He is a brute," but the word bruto does not have the connotations it would have in English of strength or callousness, but rather the implication of stupidity.

3/ "Somos bestias, Todos son bestias aquí!" is literally "We're beasts, everyone is a beast here!" Again, the primary connotation is of stupidity.

anybody else except a bit slower; they are totally different. They are so far from being human beings that it is hardly an exaggeration to call them animals. From the *jíbaro's* point of view, a stupid person lives like an animal. Describing him as such is a simple statement of fact.

Who is the recipient of this harsh judgment? Paradoxically, not the retardate. If you ask the *jíbaro* to identify the retarded people in the community, he will point to the relatively few really severe organic cases of retardation. These are the obviously simple-minded, the people who can in no circumstances take care of themselves. These cases the *jíbaro* sees as the victims of disease. Their fate is in the hands of God. The more callous may enjoy a laugh at their expense, but good people will pity them.

It is not these that the *jíbaro* calls stupid and animal-like; it is himself and his neighbors. A little questioning soon reveals that these terms will be generally used for everyone in the community, except for the few rich families and the professionals, who, in turn, come either from the rich families or from outside. It is this small group of privileged people who form the contrast to the *jíbaro's* picture of himself and his neighbors. These are the people of intelligence.

Fairly obviously, the description of intelligence is a more or less exact description of the socio-economic picture. But this is as it should be, to the *jíbaro*. Intelligence is part and parcel of a way of life. The upper class has easy access to schools, to books, to the leisure time to make use of them, and, above all, to money. With these one can be intelligent. Without them, intelligence has no meaning. One lives the life of an animal. One's existence is an alternation between working like an animal and enjoying animal pleasures.

For the *jíbaro*, then, the most important line of demarcation is the line between his own kind and people of substance. If you will, it is the line between the stupid and the intelligent. The line between himself and the retarded, while just as clear, is hardly as salient. When one meets a retardate, one thanks God that it's the other guy who is like that. But this is hardly a thought to live with every day. The retarded are few enough to be forgotten. The difficulties of a hard existence are with us always.

This sort of a classification is a far cry from the kind that a psychologist is likely to use. For the psychologist, the distinction is by no means as clearcut. He is well aware of the shadings, and is likely to feel that, for most cases, a pretty careful examination is required to estimate a person's intelligence with any confidence at all. The psychologist's concept is based on the notion of a continuum. There are clearly differences in intelligence far more subtle than the ability of our tools to measure them.

Nor does the psychologist see intelligence distributed so arbitrarily in the community. Intelligence is distributed on a normal curve, i. e., the vast majority are pretty average, a few conspicuously high or low, a very few markedly deviant. The low end of the curve, the pathologically stupid, the psychologist will call retarded. He will do so with some misgivings, aware of the relative arbitrariness of his cutoff point. But one must needs have a cutoff point somewhere, and this one is about as good as any. For the psychologist, then, the most salient distinction is the one between retardates and normals. One can, of course, make a similar distinction between the highly intelligent and everyone else, but those deviants can pretty well take care of themselves. 4/

Implicit in the psychologist's picture is the notion that intelligence is a personal characteristic. These are the sort of things that one finds normally distributed in the population. One does not find normally distributed names beginning with "A" or a habit of talking Chinese. Intelligence is, of course, affected by heredity, but is not entirely determined by it. Whatever combination of factors do determine heredity are clearly random enough to leave the resulting distribution normal.

The probabilities are that nobody has tried to explain this to the jíbaro. If one did, he might get an answer something like this, allowing for our free translation into more sophisticated language:

> "Listen, you're coming here to tell me about intelligence? Let me tell you what intelligence is. It is simply against all reality to picture intelligence as falling along a neat bell-shaped curve. Obviously it is a J-curve, and with precious little at the right side of the curve, at that. Where did you ever get the idea of this little bell-curve? Well, maybe that's the way intelligence looks in the United States. Got a nice, healthy group of people with average intelligence, but after all, most everbody goes to school and almost everybody has a chance, more or less, to develop his mind. Well, maybe it works out that way over there."

4/ Even as sensitive a sociologist as Lewis A. Dexter is likely to waste little sympathy on this group. He says, "The person who is brilliant but odd - an inventor, innovator or scientist ahead of his time, the man who introduced the umbrella into England, Einstein as a child, Willard Gibbs, Algernon Swinburne, Dante Gabriel Rossetti - may be discriminated against, much as the stupid are. But such a person has, if he chooses to exercise them, opportunities to get around discrimination which are not open to the stupid." The Tyranny of Schooling, Lewis Anthony Dexter, Basic Boods, inc., New York, 1964, p. 43 !

> "Now in Puerto Ric, when I was born, things didn't work out that way at all. If your father was the owner of a plantation, you went to school and learned how to read, you were an important man. If you were the son of a cane cutter, it didn't do you much good to have brains. If you weren't stupid to start with, you ended up pretty stupid after ten years of cutting cane. By and large, the amount of intelligence you had depended on what kind of a family you were born into. Don't tell me all these other factors even things out. And I don't need those I.Q. tests, either. Just tell me your father's name and I'll tell you whether you are bruto or intelligent."

The most jarring note in our jíbaro's discourse, aside from its air of irreverence, is its fatalistic attitude. Well, the jíbaro is a fatalist. 5/ He is likely to take setbacks with a shrug of his shoulders saying, "A quien Dios se lo da, San Pedro se lo bendiga." 6/ One of the things that almost all commentators on the Puerto Rican scene have agreed on is a condemnation of the Puerto Rican's resignation. The Puerto Rican's willingness to attribute his failure to the will of God is forever being unfavorably compared with other people's optimism.

But is this contrast all so clearcut? Let us look at our psychologist's optimistic view of mental retardation. Does the psychologist suggest that retardates are just as good as anybody else? Not exactly. He does think that they may be taught a few more things than people realize. He will argue forcefully that most retardates could learn to be self-sufficient. But what about the people who hold the jobs now that the retardates could hold? Obviously they could be educated a little bit more. Each

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5/ Albizu-Miranda, Carlos and Marty-Torres, Herbert. Atisbos en la personalidad puertorriqueña. Revista de Ciencias Sociales, Septiembre 1958.

6/ "Let Saint Peter bless whomever God gives."

level has its limited area of play. 7/ Obviously this is a very limited optimism. As Gilbert and Sullivan would say, "modified rapture." In his own way, the psychologist seems quite as much a fatalist as our _jíbaro_. He simply has the advantage of addressing people even more naively fatalistic than he is.

The disconcerting part of our _jíbaro's_ fatalism is that it occurs where we least expect it. He has connected two ideas which we view quite separately. One is intelligence and the other is family. But everyone is fatalistic about his family. No one asks what family he's going to get born into. It is just the notion that intelligence is a by-product of this unconscionably early decision that offends us.

Neither the psychologist's theory nor his experience supports this notion. The psychologist expects different members of the same family to have different intelligence, and his results confirm this expectation. In such a situation, the psychologist may be expected to view intelligence as a personal characteristic. That the phenomena he is explaining are true only in his environment, and only as a function of a social system that he helped design, is unlikely to occur to a psychologist. Like the man in the street, he is prone to confuse social realities, the product of a complex of human ideas and explanations, with the nature of things. So long as his theories produce predictions that are reasonably accurate, the psychologist is confirmed in his opinion of their correctness. So long as he works within his own society, there is little to remind him of the cultural definition that forms the basis of his ideas.

7/ "Likewise, in the case of retardation, a good many persons who appear dull, stupid, and retarded can in fact do well academically, They may suffer from the _curable_ effects of a disease or disability; they may lack motivation; they may have been brought up in a society so different from ours that they need to learn what is desired in our society in the way of academic achievement before they can manifest their 'true intelligence.' Nevertheless, there is an upper limit, so far as we can at present tell, beyond which a given person cannot go." Lewis A. Dexter, op. cit. p. 98.

Nor, indeed, are first impressions of Puerto Rico likely to shake the psychologist's belief in the eternal verities. San Juan looks very much like New York, with the occasional exception of a palm tree here and there. In general, big cities everywhere look alike, and city-dwellers everywhere are in some sense citizens of the world. San Juan is, to boot, somewhat Americaniz ed.. The Sanjuanero is anxious to show his modernity and is likely to speak the pscyhologist's language, both figuratively and literally. Our conclusions, then, about the Puerto Rican way of thinking would have to be severely qualified in speaking of city-dwellers. Much the same sort of qualification has to be made in speaking of the upper classes, even in the country. Many of these people are well educated and their thinking is likely to reflect the latest fashions, in psychology as in other things.

It is in the poorer parts of the countryside that we expect to find the traditional way of thinking that we have sketched out. Even here, appearances are against us. We find cars parked even in front of tin shacks. Television antennae are common. The radio is ubiquitous. Our first impression is likely to be that of a society in pretty close contact with the twentieth century. The schools are conspicuous. If we ride by on a weekday, we are likely to pass large groups of children immaculately dressed in carefully tailored school uniforms, looking as gay and carefree as children anywhere.

In general, the almost magical belief in the power of education in Puerto Rico seems to belie our pessimistic picture. Even the shirtless jíbaro of Diaz-Alfaro's story 8/ maintains his belief in education so that his children will not have to share with him the "life of a mangy dog, dependent on the bone that someone throws him." Trully, almost every discussion of Puerto Rico ends in the hope that education will improve the situation. Nevertheless, education has had only a limited effect in changing patterns of thought. Firstly, education is seen as something for one's children rather than for one's self. It is, of course, quite respectable to attribute one's own low status to the inadequate opportunities for schooling in childhood, but hardly anyone thinks of going back to school to make up for the deficiency. Nowhere in the world is adult education a popular pastime; in Puerto Rico it is practically non-existant.

Moreover, education, even for children, proves somewhat elusive. It is, perhaps, precisely the high hopes that education holds that make it so difficult to square with reality. It

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8/ Don Fruto Torres in Terrazo, by Ablardo Diaz-Alfaro, Editorial Vasco Americana, S. A., Bilboa, Spain, 1960.

almost seems as if the mere existence of the school is seen as having the magical effect. As Rogler and Hollingshead 9/ report for their sample of urban lower class respondents:

> "... All parents would like each of their children to have at least one year of high school; 72 percent would like at least one child to receive a year of college education.
>
> "Ironically, very few parents display an active interest in the education of their children. Seldom do they ask what the children are learning at school; there is no insistence that class assignments be completed, and it is an unusual parent who assists his child with homework. If a child is absent from school for a prolonged period of time or if he is held back in the same grade at the end of an academic year, the parent accepts this with passivity and resignation... Although the parents aspire for upward mobility for their children, little is done to instill the motivation for such mobility in the child by giving him positive support for high achievement in school. Rewards and punishments in socialization are organized according to conformance with respect, obedience, deference, and morality rather than to educational gains. The parents place greater emphasis on the behavior of the child according to their rules for proper conduct than upon achievement."

All of this is not to say that neither education nor contact with the outer world will have their effects on Puerto Rico. Unquestionably, they will. But their effects on the sample of people we are studying are comparatively limited. Our respondents are from 23 to 49 years old. For the most part, they grew up in the era when today's rapid changes in Puerto Rican life were just beginning. The introduction of the Twentieth Century into Puerto Rico can be dated roughly from 1942.

In that year, Operation Bootstrap, the Puerto Rican government's first concerted effort to industrialize the island, began. It is to Operation Bootstrap and to the effects of the second World War that we may attribute the revolutionary changes in Puerto Rican life. For our respondents, these are changes they have learned to live with as adults. It is a kind of second language, which they have learned to cope with, but are never completely comfortable in.

9/ Rogler, Lloyd H., and Hollingshead, August B., Trapped, John Wiley & Sons, Inc., New York, 1965, p. 391.

The children, on the other hand, are far more used to the situation. The ideas they learn in school are taken for granted. They display a familiarity with the Twentieth Century which can be quite disconcerting to their parents. While our respondents may be relatively optimistic about the future of these children, they are considerably less optimistic about their own future. They are, in fact, immigrants into the Twentieth Century.

The discrepancy between the outward modernity and the internal traditionalism is real. Our respondents are examples of what the sociologist would call cultural lag. They are quite aware of the style and tempo of the New Puerto Rico and they approve. But somehow, in their heart of hearts, the sights and smells and attitudes of the old Puerto Rico of their childhood are more real. They are, bewilderingly, strangers in their own land. As they would say, "*tenemos la mancha del plátano*." 10/

As a matter of historical fact, the ideas with which we have credited the *jíbaro* have been connected with Nineteenth Century situations and ideas, while the psychologist's ideas have been identified variously with the Twentieth Century, industrialization, and americanization. While the most simple-minded devotee of the religion of progress may take this as a mandate for the automatic rejection of the *jíbaro's* notions, this would represent a narrow parochialism in time no whit better than any ethnocentricity in space. Ideas are not responsible for the circumstances in which they were developed; it is pure argument *ad hominum* to condemn ideas for their paternity. Whether the *jíbaro's* ideas survive the Twentieth Century depends on whether the will exists to apply them to the solution of Twentieth Century problems. Thus far, unfortunately, there is little indication of such a will.

Our respondents' committment to traditionalism can be expected to have certain effects on the position of the retardate. 11/

10/ "*Tenemos la mancha del plátano*," is literally "we have the stain of the plaintain." These stains, damnably difficult to remove from skin or clothing, are the hallmark of all those who work in the banana fields, and, by implication, of country folk, generally.

11/ By retardate, we mean a person who would be judged retarded on the basis of psychological tests. For convenience we will maintain this usage, although we shall try to demonstrate that it does not have predictive value.

In the United States the retardate is identified and to some degree separated from the community. He has high visibility. He has an identity as a retardate. Lewis Dexter 12/ argues that retardates are an oppressed minority. In such a situation, it is difficult to decide to what extent the retardate's behavior is a function of his minority status rather than his actual intellectual level. There is certainly some experimental evidence to support Dexter's conclusion that minority status is the determining variable. The situation in the United States, however, does not lend itself to any rigorous test of this hypothesis.

In Puerto Rico, the absence of a clearcut identity for retardates allows us the opportunity to check out Dexter's hypothesis. To the extent that retardates in Puerto Rico share the fate of normals, Dexter's notion that an identity as a retardate is a necessary condition for retarded behavior is supported.

In general, Dexter's argument that Americans treat retardates as a minority group is cogent and realistic. There is, however, one major difference. Americans traditionally think of minority groups in terms of families. It would be inconceivable to a typical American to be told that one of his children is Negro. It is not only that such things do not happen, they can't happen. The concepts of reality which would allow for such a possibility do not exist. A Negro is one who is born of Negro parents, or of one Negro and one White parent.

The retardate is not analagously defined. While a parent is by no means delighted to discover one of his children is a retardate, a refusal to accept the situation is more likely to be an indication of hubris than of the lack of a conceptual framework. The current focus of propaganda about retardation is designed to underline the belief that retardation, like rain, falls on the just and the unjust alike. Implicit in this campaign is the attitude that convincing Americans of the impartiality of nature in distributing retardation is a problem not of changing their intellectual ideas so much as in helping them to emotionally accept the fact the retardation has struck in their family. It is not so much that their ideas have to be changed, as that they must be persuaded not to allow their sorrow to interfere with their clear thinking.

12/ Dexter, Lewis Anthony, op. cit. p.26

Clearly, Americans' conceptualization of retardates and of minorities is quite different. In the ordinary course of events, both conceptualizations are taken for granted and are assumed to be founded on the way things are. Interestingly enough, Puerto Ricans share both these conceptualizations. They use them with different referants. The notion of the personal characteristic is applied to negroness.

In Puerto Rico, negroness is seen as a continuum. It is a characteristic which one may have to a varying degree. No one is, however, completely free of it. "El que no tiene dinga tiene mandinga." [13] If you want to see the degree of negroness a person has, you give him a test. Granted, the test is rather more simple than those the psychologists use: you look at the color of his skin. But you do not ask who his family is. Even if they looked completely white, it would make no difference; almost everyone's background is assumed to be partly Negro.

It comes as no great shock to the Puerto Rican to find that one of his children is Negro. He is somewhat dismayed that this child will have poorer life chances than he would otherwise. But he finds nothing conceptually difficult in the situation; it occurs frequently enough. If he is an indulgent parent he will try to be kinder to this child; if not, he may reject him. He has, in any event, no way of denying his existence. Like everyone else, he will call the darkest child the Negro member of the family, with no sense of incongruity: "Este es mi negrito."

Without belaboring the point, we can say that the Puerto Rican uses the same conceptual apparatus for understanding negroness as the North American uses for understanding intelligence: negroness is a personal characteristic normally distributed in the population; the low end of the curve, the pathologically dark, are Negroes.

On the other hand, as we have seen, Puerto Ricans think of intelligence much as Americans think of race. It is a matter of family. It is not any question of subtle shadings; it is an either/or characteristic.

13/ "El que no tiene dinga, tiene mandinga," means "If you're not descended from one African tribe, you're descended from another African tribe."

It may seem to the reader at this point that the development of such concepts as intelligence and negroness within a culture is a rather arbitrary affair; nothing could be further from the case. Concepts in use follow a certain internal logic based on the functions they serve. North American notions of negroness flow from a series of political decisions made in the past, by which the claims of mulattoes to higher status were rejected. Where other parts of the world adopted the policy of playing mulattoes and Negros off against one another, slave owners in the United States chose to rely primarily on outright repression. The decision committed them to a certain understanding of the situation and presented all parties with a picture of the world most easily explained in what became the conventional understanding. Hundreds of years later this understanding provides the framework for dealing with race relations, although the decisions on which it was based are long forgotten.

As we can see, concepts are subjects to cultural lag, remaining in force as explanations after the policy they were designed to justify has been changed. The origin of concepts usually show a heavy programmatic component. Once the program has been implemented, the concept lends it a degree of stability, safeguarding it from being capriciously tampered with.

In a similar manner, we may understand the jíbaro's and the psychologist's notions of intelligence as differing most fundamentally in the use to which they are put. The psychologist developed the notion of intelligence as an independent variable; it is a tool to understand other phenomena. The psychologist is attempting to explain why, among a group of people, some do well in school, go on to acquire more education, and lay claim to jobs in the social system which purport to require a good deal of abstract reasoning, while others do badly in school, drop out, and find jobs requiring manual skills or none at all. When the concept of intelligence began to be sharpened for scientific use, it was postulated as an innate upward limit on the person's ability to solve problems or absorb knowledge. A wealth of evidence gathered subsequently has rendered this formulation suspect and left psychologists far more cautious. It is quite common to find intelligence defined in the textbooks as what intelligence tests measure. This is carrying operationalism to the point of circularity. It gives good ground for the suspicion that the psychologist is still covertly relying on the old formulation, too useful to abandon and too precarious to defend.

The psychologist cannot easily adopt the alternative of considering intelligence as the result of education rather than its prerequisite; such a course would leave the concept totally unable to serve the function for which it was designed. The *jíbaro* has no such compunctions. He is at no loss to explain why the plantation owner's son goes to school and becomes a doctor, while his stays at home and becomes a cane cutter. He has no need to reify internal differences to account for what seems to him the self-evident result of the social system. Insofar as he thinks of intelligence at all, it is something to be explained, rather than a tool for explaining other things. Nor is it particularly puzzling; he'll explain it to the psychologist anytime the psychologist wants to come around to listen.

How, then, has the psychologist gotten himself into the anamolous position of working with a tool he can neither own nor abandon, a tool which does not approach adequately explaining what it was designed to explain? It seems most likely that the psychologist has fallen into the tempting error of considering education as a constant. Certainly, despite all protestations to the contrary, intelligence tests measure achievement. Suppose, however, a cohort were given exactly the same opportunities for learning. In Binet's France, this did not seem an unreasonable requirement. No sweeping changes were contemplated in the school system. A studied effort was made to have all students in the same grade given exactly the same curriculum. Could the residual differences between students be attributed to innate differences in the ability to absorb? Unfortunately, the argument cannot stand up under close scrutiny.

Firstly, over long periods of time, the expected performance of average people has varied immensely. During the Middle Ages, a person who could do long division was a genius. Modern educators expect any moderately endowed high school student to cope with the problem. The difference is the invention of the zero. Anyone who doubts the revolutionary effects of this invention can try a long division problem in Roman numerals. This improvement covers only a limited segment of the range an intelligence test should measure. In other areas, there has been little advancement since the Middle Ages. It is within the abilities of speculation to imagine a period in the womb of time when corresponding progress has been made in all the areas we consider indicies of intelligence. Shall we call lowest members of such a society geniuses? Or, like Franz Werfel, consider an imbecile anyone lost beyond the realms of Integral Calculus? While discussion of the terminology to be used comparing the intelligence of persons across centuries is moot, consideration of the problem leads to the conclusion that the tools of understanding and education of any particular period set the upward limit to the achievement of the persons of that era. Through the foreseeable future, that limit is below any hypothetical limit imposed by genetic structure.

Secondly, even the complete standardization of the curriculum will not control the effect of education, for school life is but a small part of the experience a child receives every day. If, for all the people the student sees as like him, formal education makes no difference, no golden voice of teacher nor charm of book will wash out the taint of unreality. No laboratory situation, still less any society, has equalized opportunity to the point where speculation on residual differences is tenable.

Yet intelligence tests work, howbeit inadequately, as predictors of future behavior. In a complicated world, there are a host of intervening variables. Many of those factors which make for achievement in a ten-year-old continue to make for his achievement at the age of twenty. In the present state of the art, the best predictor of future performance we have is past performance. Intelligence tests offer such a measurement, comparatively free of the more idiosyncratic factors that beset more specialized indicators. Tapping some unanalyzed mix of motivation and opportunity, intelligence tests are happily contaminated by the determinants of future achievement.

More important, intelligence testing has a high programmatic content. The process sets into motion a self-fulfilling prophecy. The results of the testing, communicated or leaked to the student and his most significant others, channel his subsequent experience and determine the expectations which he will use as a model for his conduct. The student's score affects the opportunities he will have and the manner in which they will be offered to him. It sets the stage, in myriad ways, for him to perform at a certain level. In fact, psychologists have been creating the world they have been trying to explain.

Psychologists have flourished in an environment, which they have to some extent helped to create, where opportunities have been distributed according to merit, i.e., according to the ability of the youngster to absorb formal education. While the socio-economic status of the family has a great deal to do with the ease of continuing education - it is still easier for a rich man's son to go to college - the differential advantage is sufficiently small that psychologists can view it as a contaminating factor. It has been easy for the psychologist to view the social system, really as artificial as any other kind, as the natural order of things, So long as he remains in his environment, he can continue in his delusion. He will remain puzzled by the _jíbaro's_ assumption of the familial nature of intelligence, as plausible an assumption in an environment where opportunity is apportioned largely on familial criteria.

Binet saw the problem as predicting the behavior of persons in a fixed system. His successors have helped to still further fix an already rigid educational system. The _jíbaro_, likewise, has used his concept of intelligence to enshrine an already existing system. Nevertheless, the psychologist set to school by the _jíbaro_ need not learn from him a counsel of despair. The _jíbaro's_ treatment of intelligence as an explanandum, in the hands of the psychologist, begs for better explanation. The psychologist has a far greater experience in seeing the social system as a manipulable variable. He may treat opportunity as a factor that can be systematically expanded and motivation as an attitude that can be systematically encouraged. An upward limit imposed by the society's lack of knowledge can be raised. If the psychologist is unlikely to invent new zeroes, he can work to give today's students the best of today's ideas in place of the texts of yesterday. Most important, he can join in the attempt to make society a place in which it is worth the while to learn.

From the _jíbaro_, the psychologist can learn to see intelligence tests as a measure of where his job starts.

CHAPTER II

The Socioeconomics of Mental Retardation

In the last chapter, we argued that the fate of retardates in any particular society was a function of the attitudes of that society toward stupidity. Implicitly, we were defending the characterological position that people's ideas shape the social realities that they purport to reflect. It requires more foolhardiness, however, than the authors can muster to insist that the resemblance between realities, however social, and attitudes is unidirectionally caused. Attitudes do not grow in a vacuum; they are affected by the institutions of the society in which they appear. People's attempts to be realistic are not simply window-dressing. The perennial struggle to make the outside world and our picture of it conform to each other results now in a change in the world, now in a change in our image. Either, the world or ourselves, can be partly understood as a function of the other.

In this chapter, then, we will attempt to explain the fate of the retardate in Puerto Rico and the attitudes toward retardation as a consequence of the institutions of that society. Specifically, we shall concentrate on social class, occupational patterns, and the educational system and how they mesh to form a coherent world in which the retardate must operate.

Puerto Rico is in a transitional stage between two ideal-types: the traditional society and the complex, industrial society. Let us begin with a stereotypic view of each of these.

In a traditional society, traditionally, the class structure is quite simple. There is a large lower class, composed of virtually everybody. Stretched thinly above the lower class is a small middle class of artisans and skilled workers and a still smaller upper class of landed proprietors and professionals. These classes are pretty clearly demarcated, and there are few transitional types. Movement between classes is limited in fact, and even more limited in theory. Such movement as exists is not a steady progression but a quantum jump; it is an act of God, such as winning the lottery. Calculations for upward mobility are likely to exist only on a fantasy level. The overwhelming probability is that a person will remain in the class to which he was born.

The occupational structure is patterned in terms of class. Members of each class have a choice between a limited number of alternatives appropriate to persons of that station. It is no easier to imagine oneself holding a job conventionally held by members of another class than being a member of another class. Classes, in fact, tend to be defined in terms of function, i.e. the jobs permitted their members.

Given this situation, changes in one's job cannot be expected to lead to any great improvement in one's social status. For most members of a traditional society, the concept of a career does not exist. Jobs, where they are at all deliberately selected, are chosen in terms of immediate benefits or preferences.

Since most lower, or even middle class jobs are not thought to require great skill to be done passably well, a person can get any job available that he wants, within the appropriate alternatives. Most children drift into their father's occupation, not because of any preferential choice on their part, but for the lack of anything better. While occasional switches make some difference to the person involved, they have little effect on the system as a whole. Little training is assumed to be needed for most jobs, and that little is acquired on the job.

Among members of the upper class, the situation is a trifle more complicated. Boys have the choice between entering one of the few professions or managing the family's farm or business. The former requires some formal education and apprenticeship, while the latter does not differ in its qualifications markedly from lower class jobs. Those who wish to become professionals form a group, largely self-selected, who can readily see the market value of a formal education. Whether or not an upper class child acquires much education, it does represent a real option for him, where the consequences of his decision are evident.

In such a society, with its small upper class, little education is needed, and little is provided. Aside from its use in training for the few professions, education has little utility in everyday life. It helps to provide an air of culture for those persons for whom such an appearance is proper. The upper class sees little reason to extend education to the poor. Of scant use in daily existence, it would only provoke dissatisfaction with the existing state of affairs and stimulate aspirations which must, of necessity, remain unfulfilled.

This view of education is shared by the lower classes. The poor, if anything, can see even less possibility of turning schooling to any account. While their sentiments are uttered in a tone of resignation rather than complacency, the burden of their argument is the same. If one is doomed to become a farm hand, what could there be in education which would make it worth the time, the trouble, or the risk of damaging the brain?

In such a society, retardates are virtually indistinguishable from the rest of the poor. All the poor are more or less retarded.[1] The paucity of educational opportunity and the lack of intellectual stimulation lead to a stunting of mental growth. Menial jobs offer no challange to one's intellectual capacities. Few of the poor make anything like optimum use of their native abilities.

Intellectual impoverishment, however, is not merely the result of a lack of necessary encouragement. Poverty is a learned role. In the process of learning it, one learns to be stupid. Being conspicously intelligent is putting on airs. Implicitly, one is asserting his claim to being better than the people around him, an action inherently frustrating in a society which allows him no opportunity for validating these claims. One must learn to accept stupidity as part and parcel of a way of life; a vain attempt to achieve can lead only to needless suffering.

In a traditional society, one's ultimate fate is determined. It makes little sense to strive for small successes, when no series of successes can be imagined as cumulating in a major change in condition . The joys of small victories are not worth the risk of defeat. None of the people whose lives you wistfully envy arrived at their position by striving, nor can you imagine any amount of striving on your part resulting in your joining them. There is little alternative to the resignation which more industrial societies will, in retrospect, see as serenity.

The attitude, whether it be considered resignation or serenity, is somewhat deceptive. It is applied primarily to situations which the members of a traditional society, with some justice, consider unalterable. Since these areas of life include conditons which, to a member of a complex society, appear both highly problematic and highly central, the latter tends to exaggerate the pervasiveness of the traditionalist's fatalism.

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[1] We are using the word "retarded" as usual in the psychometric sense. As Lewis Dexter points out (The Tyranny of Schooling, Basic Books, Inc. New York, 1964, p. 50), the concept of retardation is meaningless in some underdeveloped countries. While this is one of the main points of this study, we see no reason to forego the use of so convenient a word to describe the judgment of individuals which could be made on the basis of techniques suitable to a more advanced society, keeping in mind that many of the implications which would follow from such a judgment are not warranted in underdeveloped societies.

The traditionalist is likely to take an interest in the many areas in life in which he can legitimately compete. He may take pride in his strength, his stamina, his workmanship, or a whole host of what may be loosely described as religious or moral qualities. While every man may not be equally well endowed in these areas, strenuous effort can go a long way toward making any man a virtuoso. In particular, the traditionalist will pay a mind to the respect or dignity due him. While these characteristics may not intrinsically be neglected in a complex society, they have, in practice, been considerably downgraded. It may be that the human mind is condemned to an economy of scarcity, by which the number of values a person holds dear is inherently limited. In any event, the traditionalist will pay the same attention to these virtues that a member of a complex society will lavish on his car or his promotion. Within these areas, the traditionalist is anything but a fatalist. He will condemn failure to live up to his standards as ardently as the member of the complex society condems poverty.

The poverty, for the traditionalist, is more bearable in that it is considered the root rather than the result of stupidity. The possibility of a circular relationship between poverty and stupidity is not readily apparent in the traditional society. It is palpably obvious that the poor's lack of opportunity perpetrates stupidity. That many of the poor might not be able to take advantage of opportunities is masked. Only in a society where opportunities are available can one become aware of differential response.

The complex society offers a host of alternative opportunities. The institutions of this society reinforce each other in lending to each decision the air of being a critical choice.

In a complex society, the lower and middle classes are roughly equal in size, the upper class, considerably smaller. Any attempt to be precise about the size of classes in misleading, for there are no clear-cut boundaries. Most indices show a continuum. How big you consider each class depends on where you put your cut-off points. In the absence of any agreement, all procedures are somewhat arbitrary.

If the experts can arrive at no consensus about the class structure, the people are still freer. Where you place yourself depends on how many doubts you are willing to give yourself the benefit of. Generally, people rank themselves a trifle higher than others are willing to rank them.

In so fluid a situation, any claim to prestige is likely to appear an opportunity to advance one's position or validate some previously dubious claim. Clearly each small step, in addition to any intrinsic satisfaction it may contain, can bring one that much closer to heart's desire. If the mailroom clerk's chances of becoming president of the board of directors are no greater than they ever were, there are many intermediate steps in the hierarchy from which an ex-mail-boy can view his rise with no small satisfaction. As symbols of one's standing, these steps are subject to, at times laboriously contrived, differentiation. The man from a traditional society may not comprehend the relative importance of an office with two windows or a silver carafe, but the person of understanding will. The social structure seems to be composed of a series of small steps, each simultaneously an end and a means.

Such a structure is highly conducive to the development of long range goals. This involves the evaluation of alternatives not merely in terms of immediate satisfaction, but in the light of the opportunities they afford in opening up later possibilities. The concept of a career, found in traditional societies only in the upper class, and there in a fairly simple form, is in the complex society widespread. There are whole series of jobs which are classified, or misclassified, as trainee jobs. The concept of career is extended downward into the educational system, where choices purporting to determine areas of specialization are presented to high school students for their mature selection. It is almost a ritual to greet strange four-year-olds by asking: "And what are you going to be, when you grow up?" For a child whose parents are part of the structure, this is a meaningful, if perplexing, question. The child will, in a few years, be asked to take steps which affect later career options.

Educational opportunities in the complex society are far more widespread. While everyone does not have the same opportunity, everyone has some opportunity. By comparison with the traditional society, the discrimination against the poor is much more subtle. When one blames his poverty for his failure, there is always some doubt about the matter; there is always someone equally poor who did better.

In any event, the complex society considers education its particular concern. As usual, when society begins to institutionalize its concern, the process shifts from being optional to mandatory. All complex societies now legally compel school attendance. The laws are rather rigorously enforced wherever the school system has the physical capacity to handle all the potential pupils. It cannot be expected that the schools will remain the same as before in a situation in which education is so indiscriminately applied. Whereas, before, the school had the liberty of formulating its goals and retaining such students as seemed likely to aid it in achieving those goals, the school is now constrained to cope with some indeterminate number of clients whose abilities or proclivities do not predispose them to any such cooperation. While it must, in mere self-defense, devise some activities to divert this group, it would be stretching coincidence too far to assume that very many of these activities would consist of what a previous generation would have called education. However, having compelled numerous unwilling clients to attend, society must now fulfill its share of the bargain. The schools must now certify that attendance in the form of diplomas.

Simultaneously, other changes have been occurring which affect the school system. For reasons which the authors do not pretend to understand, the shift to a complex society has been accompanied by changes in the family and in religion which prevent their exercising many of the functions they filled in traditional society. Having set up a comprehensive school system, society looks to it to undertake whatever other jobs other institutions seem to be neglecting. In general, education is given the responsibility to act as the primary transmitter of culture. These various responsibilities limit the attention that the school system can give to merely academic considerations.

Despite its commitment to the goal of educating everyone, the school system finds certain people unassimilable, even when it uses one of the milder, more pleasant tasting brands of education, The retarded, the unmotivated, the unsocialized, all unwillingly attending a school they regard as a prison, present special problems to an already harassed teacher. Any smooth running school system must find a way to identify and segregate these deviants. It is society's need rather than their own that serves to demarcate these groups; in another type of society, they would be indistinguishable. At any rate, the school shunts these off to a different track. Deliberately or otherwise, it has categorized the members of these groups, and in so doing has laid the foundation for their identity. These people are, after all, children and even more likely than adults to define themselves in the terms in which the powers that be define them. In regard to the definition of deviants, at least, the schools fulfill their ambition to be the transmitters of culture.

While the relations between deviants and the school system are anything but cordial, both sides may console themselves with the thought that the two will soon part company. The deviant, like almost anyone else, is going to look for a job. The job situation, however, is markedly different from that in the traditional society.

In a complex society, there is a great diversification in the occupational market. Job specialization seems to increase, almost from day to day. The Dictionary of Occupational Titles lists some 35,000 different jobs, but this list is far from exhaustive. Nobody really knows how many kinds of jobs there are, still less what a person with that job does. This lack of knowledge can be a marked inconvenience, if you have to hire someone to do a job you know nothing about. Yet this sort of thing happens every day. If you happen to be an interviewer in a personnel department, you look for a job description, either from the people who are supposed to know or from a canned list, like the DOT. These job specifications make very inspiring reading. One cannot help but be impressed by the number and complexity of skills needed to do the least of the myriad tasks of this mechanical society. It is only when you begin to look at the people who hold down these jobs that you realize the degree of exaggeration that finds its way into job descriptions.

How are we to account for this systematic discrepancy? The compilers of the DOT are given as unbiased a description as possible of the job specifications. It is presumably the specifications themselves that are unrealistic. Apparently, these specifications are the results of a process of aggrandizement that lacks the usual structural checks. Ordinarily, in a complex society each person can take advantage of a degree of ambiguity to assign himself a slightly higher rank than others would assign to him. There is, however, enough consensus on ranking others so that the presentation of too presumtuous a claim leaves one open to the risk of ridicule. Claims, then, are constantly subjected to the process of adjustment by persons of opposed interest.

The pattern in job specifications is different. Here, the holders of a job are motivated to overestimate the complexity of the job. Their supervisor's position is similarly enhanced by being in charge of persons doing more complex work. Persons in charge of hiring are expected to acquire the best possible candidates. They run no great risk in hiring over-qualified persons, but are subject to criticism if they hire persons who lack essential abilities. Hence, caution constantly presses them to go along with inflated specifications. Applicants for a job will focus their attention on demonstrating their capacities; few will have the temerity to question the propriety of the company in setting its criteria. In short, everyone who remains connected with a particular job benefits from an unrealistically demanding description, while no one stands to lose. Job descriptions, as a result, tend to get progressively more demanding, even in the absence of any changes in the nature of the job.

This process of aggrandizement leads to a steadily widening split between the abilities needed to get a job and the abilities needed to hold down the job, once acquired. It puts a premium on an almost psychopathic overestimation of one's abilities. An air of confidence becomes an invaluable aid in the pursuit of a job. The system fosters the development of a character type, described by Riesman as other-directed and Fromm as mercantile, involuntarily satirized in a host of books on how to be successful. Those who cannot accommodate themselves to this character type are progressively disadvantaged. Persons with a low estimate of themselves find the world concurring in their opinion. Persons from a traditional culture which stresses modesty are elbowed aside by avitars of a more modern public relations school. Those who can harken to St. Paul's advice to be all things to all men will not fail to gain from this ability.

From the point of view of the hiring agency, this process of aggrandizement presents other problems. While numbers of specific skills are called for in job descriptions, it cannot be expected that the applicant will come equipped with these. The wide variety sets a limit to the transferability of skills. Companies will then have to depend on the ability of the applicant to acquire these skills on the job. What is desirable is some indication of a higher order of ability, the ability to acquire specific abilities when they are needed. While no accurate evaluation of this possibly hypothetical skill is feasible, personnel departments are wont to use the amount of education as an index, Despite severe theoretical objections to this practice, the applicant with the most education, all other things being anywhere near equal, is likely to walk off with the job. In many cases, persons without the assumed requisite education are not even given the benefit of consideration.

It is perhaps belaboring the point to assign too rational a motive to companies in hiring persons with more education. The complex society considers these people of proven superiority, and the constant flow of graduates into the market makes preferential treatment possible.

In short, within the complex society, education has come to play the role of gatekeeper to the occupational hierarchy that social class played in the traditional society. In some respects, the change is more apparent than real. The poor and the poorly educated are largely the same people.

The difference lies in the fact that education is seen as being a matter of personal choice. Insofar as it is, there is no question that the sphere of personal freedom has been extended by the transition to the complex society. Considering, however, that many of these decisions are made at an early age by persons untrained to evaluations of the consequences of their acts, the mythical component of the belief that one's career is the result of free choice is readily apparent. It is small wonder that large proportions of these decisions reflect rather the pressures of immediate environment than the conscious desires of the decision-makers.

Such pressures are conspicuous at both ends of the scale. Children from homes high in the socioeconomic scale find themselves in schools whre neither personal inclinations nor previously acquired skills conduce to their benefiting from the curriculum. Children from poor homes are deflected from cooperation with the school system with scant awareness of the consequences of their action. Both of these in later years may be forgiven the belief that education is but a shiny facade for the old class system.

The increasingly tight intermeshing of the educational system with entrance requirements for the occupational structure extends into adult life the discrimination against the retardate which began in school. The logical conclusion of this trend would be the complete failure of the retardate to compete in the job market. Fortunately, every society stops short of reaching the logical conclusion. In fact, we have more problems with mentally retarded children than we have with mentally retarded adults. It is not that the adult has ceased to be retarded; they have ceased to be problems. Even in complex societies retardates have managed to find some occupational adjustment for themselves. They have found their home in the interstices of the occupational structure, where there are still some jobs exempt from the interlocking process. Then, too, complex societies have given retardates some special help which permits them to compete with others.

In general, retardates are part of the lower class of a complex society. This lower class is far smaller than that of a traditional society. It is a residual group. Those people who have been able to take advantage of the greater opportunities in a complex society have moved up to middle class positions. They, like the rest of the society, view the lower class as failures. Unlike the traditional society, the lower class is composed of failures where others have succeeded.

Why has the lower class failed? In many cases it is because they have had an objective opportunity without the corresponding psychological opportunity. They have been offered schooling without being simultaneously offered a realization of what schools could mean. People who come from a culture where schooling is a luxury may take many generations to realize that education plays a different role in present society. Societies do not become complex overnight. Even in these times of world-wide push toward industrialization, the transition from traditional to complex is counted in generations. Within societies in transition, the modes of thinking of the complex society have differential appeal. The upper classes, most in contact with the outside world and beginning from a way of life closer to ways of the complex society are the most responsive. The changes filter down the social scale slowly. The lower class, where time out of mind their entrance into the job market has been restricted by their social class, is the last to become aware of the changing conditions. Those who catch on leave. The rest find it more comforting to maintain their faith in the unalterable nature of class distinctions.

Further, lower class children, like their parents, are oriented to short range goals. School systems have been based on the assumption of students having long range goals and being able to postpone gratification until they can reach their goals. Those students who have been able to adopt the goals of the school system or have been compliant enough to go along with the school system's demands have found themselves, in time, moving into class status. It takes courage for the lower class student to cope, on the one hand, with the middle class conceptions of a school and, on the other, to fight the lower class expectations of his friends and family. His friends leave school at an early grade to take menial jobs and laugh at him for continuing.

The goal expectancies of the lower class are of an immediate nature. One is not rewarded for trying to implement long range goals. On the contrary, to behave in terms of long range goals is to be labelled a crank or deviant. The needs one has are pressing and require immediate gratification, it is something demanding gratification here and now, not tomorrow and elsewhere. These values are early instilled in the lower class child's mind. So, at an early age, he realizes that to stay in school with the idea of obtaining a better job in the future, while his father breaks his back trying to bring up a family, is not the accepted norm. Though perhaps he is not directly told to quit school and lend a helping hand, this idea is in myriad subtle ways communicated to him. It takes courage for a lower class child to accept values which are strange to his culture, the values of the school system.

While, generally speaking, the lower class can be characterized by short range goals and the middle and upper classes by long range goals, the implications of this fact are widely misunderstood. The middle and upper classes take a predilection for short range goals as a personal characteristic. This allows them an up-to-date version of the myth of the happy, carefree savage. The lower class person is seen as one who uses his option of personal choice capriciously, ignoring long term benefits for transitory advantages.

But, in fact, the lower class is faced with a different series of short term pressures, far more extreme than is usual among the more well-to-do. The ability to opt for long term considerations is in large part a luxury based on the relative absence of severe short range pressures. There is little warrant for comparing the short and long term proclivities for two persons with different sets of short term pressures, as though their predilections existed in a vacuum. When a middle class person lowers his standard of living in hope of later benefits, his option is largely the result of his personal choice. It is eminently natural for him to assume that such is invariably the case. But for a lower class person, it takes heroic courage to make a superficially similar choice, ignoring short range difficulties to attend to long range goals. At times, it is virtually impossible for him to make such a choice, a matter of life or death. Short or long term proclivities are, in fact, far more of an environmental variable than a personal one, for it is the environment which dictates the degree to which the proclivity becomes a matter of personal preference.

Nor is the difference in proclivity simply a function of each individual decision. The lower class environment is full of examples of persons who have had to abandon long term ambitions because of a change in immediate circumstances. The lower class person has little security that the ability to pay for present schooling will continue until he can reach his goal. More than the temporary freedom from present pressure is involved; it is the reasonable expectation that such freedom will continue that the lower class lacks. Even under the best of circumstances, the lower class child is taking a gamble where the middle class child is performing a calculation.

Nor is it the usual case that long or short range considerations form the basis for decisions. Investigation of the nature of decision-making shows large proportions of persons are simply carried along in making decisions similar to those made by persons around them than decide on the basis of thought-out evaluation of the result of the decision. Thus, the operative factor is not that the middle class child has more long range goals; the operative factor is the system which enables him to remain in a competitive position without long range goals. Even if he just coasts along, imitating his peers, he finds himself, as an adult, in position to compete. It is not the child, but the system which has integrated immediate goals into long range goals. On the other hand, the lower class child who imitates his peers finds himself, as an adult, confined to the lower class.

The lower class in a complex society is stigmatized for its lack of ambition and lack of commitment to long range goals. Given the structure of the society, it takes far more ambition for a lower class child to rise to the middle class than for a middle class child to remain in the middle class: he must swim against the current that is pushing the middle class child along.

Neither a completely traditional nor a completely complex society, Puerto Rico spans a large portion of the transitional area. Peasant and plantation communities is the hills, while in contact with twentieth century civilization, retain many of the ways of thinking of a traditional society. The older generation was brought up in an isolated culture to which the idea of progress was foreign. Right now these communities are in the first throes of a struggle for modernization. Within these villages retardates share the same equivocal success as his non-retarded fellows. The urbanized areas begin to look like complex industrialized societies anywhere. The island thus presents an opportunity to study a cross section of successful and unsuccessful retardates at different stages of societal development. It makes it possible to examine at the same time the relationship between retardation, success, and social structure.

CHAPTER III

Methodology

Purpose

The increasing complexity of our society makes it more and more difficult to find occupational roles for the mentally retarded. Nevertheless, even in the worst of circumstances, some retardates attain occupational success which seems to be out of the reach of others. 1/ It seems worthwhile studying the differential characteristics of these two groups in search of clues which aid in the vocational rehabilitation of adults with subnormal intelligence. The specific aims of the study are to determine (1) the proportional distribution of successful retardate careers and (2) the processes accounting for success and failure.

1. Using a sample of the adult population of Puerto Rico, between the ages of 23 and 49, 2/, this study is designed to test out a methodology for identifying retardation. 3/ Using this method,

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1/ See, for example, Ruby Jo Reeves Kennedy, Social Adjustment of Morons in a Connecticut City, State Office Building (Hartford, Conn., 1948). Gerhart Saenger, The Adjustment of Severly Retarded Adults in the Community, New York State Interdepartamental Health Resources Board (Albany, New York, 1957); C. Charles, "Ability and Accomplishment of Persons Earlier Judged Mentally Deficient," Genetic Psychology Monograph, 47:9-19 (1953); M. Mathews, "One Hundred Institutionally Trained Male Defectives in the Community Under Supervision,"; Mental Hygiene, 6:332-42 (1922). A list of occupations successfully held by mental retardates was compiled by N. Keys and Jeannette Nathan, "Occupations for the Mentally Handicapped," J. Applied Psychology," 16:497-511 (1932).

2/ There are two principal reasons for specifying an age range between 23 to 49 years: (a) it will enable us to ascertain their occupational success, and (b) the subjects can satisfy the age requirements for probable vocational rehabilitation services.

3/ Censuses of mental retardates are usually based on lists from school or military testing programs, or institutional populations. It is clear, however, that these are incomplete--especially with respect to the successful retardates. For a study of adult retardates, the costs of a follow up of older lists may be greater than the cost of a screening program. In any event, the data for a census approach are not available in Puerto Rico.

we hope to arrive at a reliable estimate of the prevalence of retardation among the adult population. Further, we hope to learn the distribution of successful and unsuccessful retardates by various demographic characteristics: sex, age, and community types. We are interested in this distribution for two reasons. Firstly, it gives us some idea of the scope and nature of the problem. Secondly, the distribution offers clues to the causation of both retardation and success.

2. One of the best established generalizations from research with mental retardation is that IQ is not a good predictor of social or occupational adjustment. 4/ We shall attempt to evaluate the utility of IQ in predicting occupational adjustment as compared with other psycho-social variables.

4/ In a study intended to examine the relationship between vocational training and succcessful employment, Cowan and Goldman reach the conclusion that neither I. Q. nor training were good predictors of vocational adjustment. In their estimation the most significant criterion for predicting vocational success was the enhanced self-image resulting from the support thatthe mentally retarded subjects received in the process of training. Of Lawrence Cowan and Morton Goldman, "The Selection of the Mentally Deficient for Vocational Training and the Effect of This Training on Vocational Success," J. Consult. Psychol., 1959, 23:78-84. That the capacity for productive labor trascends mere ability and responds to intrapsychic as well as social factors was dramatically revealed in the famous "Hawthorne Studies," of F. J. Roethlisberger and W. J. Dickson, Management and the worker, Harvard University, 1939. Even for academic success, I. Q. may not be a good predictor. See, for example, David Gibson, "Academic Success among high grade Hospitalized Retarded Children as a Function of Intelligence and Etiological Classification," Amer. J. Ment. Def., 1959 63:9852-859. See, also, the excellent paper by Henry J. Cobb, "Psychological Factors in Rehabilitation," Work Evaluation and Employment Preparation Services for Mentally Retarded Adults, A Report on the Institute on Sheltered Work Shops Services for the Mentally Retarded, University of Kansas, Lawrence Kansas, February, 1961.

A considerable body of current speculation, supported by scattered research findings, indicate that certain other psychological factors may play a more decisive role. 5/ We hypothesize that these findings reflect the self-image of the retardate along an autonomous-dependent continuum. A retardate with an autonomous self-image would show high tolerance of frustration, ability to take advice, and emotional stability, while one with a dependent self-image would show the opposite tendencies.

The process may be as follows: given exposure to certain family and community attitudes, marking him as feebleminded and defining him as handicapped, the retardate may internalize this definition, acquiring a dependent self-image; such dependency is related to psychological factors which make satisfactory vocational adjustment unlikely. 6/

We attempted to measure retarded and normal individuals using several indices reflecting aspects of this process.

Selection of the Sample

A sample of enumeration districts was randomly made from the listing of the 1960 census. Districts were listed in order and the number of households in each district cumulated. Forty--eight numbers were selected from a table of random numbers, the districts in which these numbers fell serving as our forty-eight communities.

Within each district we interviewed not less than seventy-five households nor more than one hundred and fifty.

5/ Allen Babroff, "Economic Adjustment of 121 Adults, Formerly Students in Classes for the Mental Retardates," Amer. J. Ment. Def., 60:525-535 (January 1956). Viola M. Cassidy and Harold R. Phelps, Post-school Adjustment of Slow Learning Children: A Study of Persons Previously enrolled in Special Classes in Ohio, Columbus: Bureau of Special and Adult Education, Ohio State University.

6/ C. Charles, Op. Cit., (Chapter II) Presents a review of studies contributing to this concept of social processes in vocational adjustment. For a sociological oriented summary of such research, see Lewis A. Dexter, "A Social Theory of Mental Deficiency", Amer. J. Ment. Def., 62:920-928 (March, 1958). A recent discussion of psychological mechanism may be found in Max L. Hutt and Robert Gibby, The Mentally Retarded Child, (Boston, Allyn and Bacon 1958), especially pp. 151-153.

As we began to map out the districts we found some containing too many and others too few families for our purpose. Where the district was too large, we mapped the district out in socio-economic terms, divided it into segments of an equal size in such a way that each segment contained a part of each socio-economic level within the district, and randomly selected one segment for interviewing.

Where the district was too small, we mapped out adjacent districts and extended our sample to an acceptable size so that the resulting segment resembled the original district selected in socio-economic characteristics.

The sample was designed to be self-weighting. All results were calculated on the basis of the proportions found in the sample and generalized to Puerto Rico as a whole.

On the basis of this method we ended up with a sample of 4423 families. These families included 6169 persons between the ages of 23 and 49. However, a large proportion of these people were not living in the household and so did not fall into our sample. We ended with 4771 persons in our sample. (See Appendix C for the demographic characteristics of this sample).

The Screening Procedure

Each household in the sample was administered a census (see Appendix D.for translation of the interview schedule). For each person in the household information was obtained which included the last grade of school he attended and his occupation. Persons who had a tenth grade education or better or were employed as proprietors, managers, or in clerical or sales positions were considered as probably normal on the basis of this first screening. 1968 persons emerged as probably normal; 2803 as probably retarded. A sample randomly selected from among the probably normals received a Stanford-Binet test as a control group.

We attempted to administer a vocabulary test to all persons who emerged as probably retarded on the first screening. All but 237 took the vocabulary test. Of the persons taking the vocabulary test 1284 received a score of 17 or less, which we considered as indicating retardation on the second screening. A sample of these were given the full Stanford-Binet; 81.8 percent received a score of 70 or less. 1282 persons received a score of 18 or better on the vocabulary test. A small group of these were administered the Stanford-Binet as a control group. 88.1 percent passed the Stanford-Binet with a score of 71 or better.

We generalized the proportion of persons failing the Stanford-Binet in each of the three groups upward to obtain our estimates of the proportion of retardation in the population (see Table 1).

Table 1

Estimated Proportion of Retarded
by Classification

Classification	Number	Estimated Proportion Retarded
Total	4771	31.6%
1st Screening (Education & Occupation)		
Retarded	2803	51.9%
2nd Screening (Vocabulary Test)		
Retarded	1284	81.9%
3rd Screening (Stanford-Binet)		
Retarded	463	100.0%
Normal	103	0.0
No 3rd screening	718	81.9
Normal	1282	21.9
Retarded	26	100.0
Normal	93	0.0
No 3rd screening	1163	21.9
No 2nd screening	237	51.9
Normal	1968	2.7
Retarded	5	100.0
Normal	204	0.0
No 3rd screening	1759	2.7

We were, of course, interested in the use of this type of screening procedure not only in order to get an estimate of retardation in the population of Puerto Rico, but as a generalized method of screening large populations for retardates. Our results seem to argue the utility of this type of procedure. Of the persons found normal by the first, educational and occupational screening, our best estimates is that only 2.7 percent are retarded. Of the persons that we considered probably retarded on the first screening, about half would turn out retarded if given a Stanford-Binet. We gave vocabulary tests to almost all of the persons who failed to pass the first classification. About half of them failed the vocabulary test. The vocabulary test turned out to differentiate fairly well between retardates and normals. Of the people who failed their vocabulary test, more than 80 percent failed the Stanford-Binet. Of the people who passed their vocabulary test, more than 80 percent passed the Stanford-Binet (see Table 2).

Table 2

Vocabulary Scores
by Stanford-Binet Scores

	Vocabulary Scores			
	17 or less		Over 17	
Stanford-Binet Scores	Number	Proportion	Number	Proportion
Over 70	115	19.3%	251	89.0%
70 or less	486	80.7	31	11.0
TOTAL	602	100.0	282	100.0%

While these results are adequate for measuring groups, it is probably advisable to change the cutoff point on the vocabulary test if the procedure is to be used for testing individuals. A score of 19, which corresponds to an average IQ of 81 on the basis of our data, should catch close to 100 percent of the retardates. This type of scoring of the vocabulary test will work directly only for adults.

If children are to be tested by this means, one must convert the vocabulary score into an estimated mental age, calculate the IQ by the usual method, and establish a cutoff point at an IQ of 80.

On the basis of the 884 subjects who received a Stanford-Binet and a vocabulary test, we calculated the correlation, which turned out to be .916. We calculated the line of regression for our subjects, which shows a marked deviation from the line of regression calculated by Cureton 7/. Using our line of regression we can structure a table of equivalences (see Table 3 and Figure 1). Generally Cureton estimates IQ as 15 points higher for the same vocabulary score. We do not know whether this is because the Spanish words are easier or whether we are dealing with a more verbal society.

Table 3

Theoretical Estimates of Adult IQ From Vocabulary Tests by Basis for Estimates

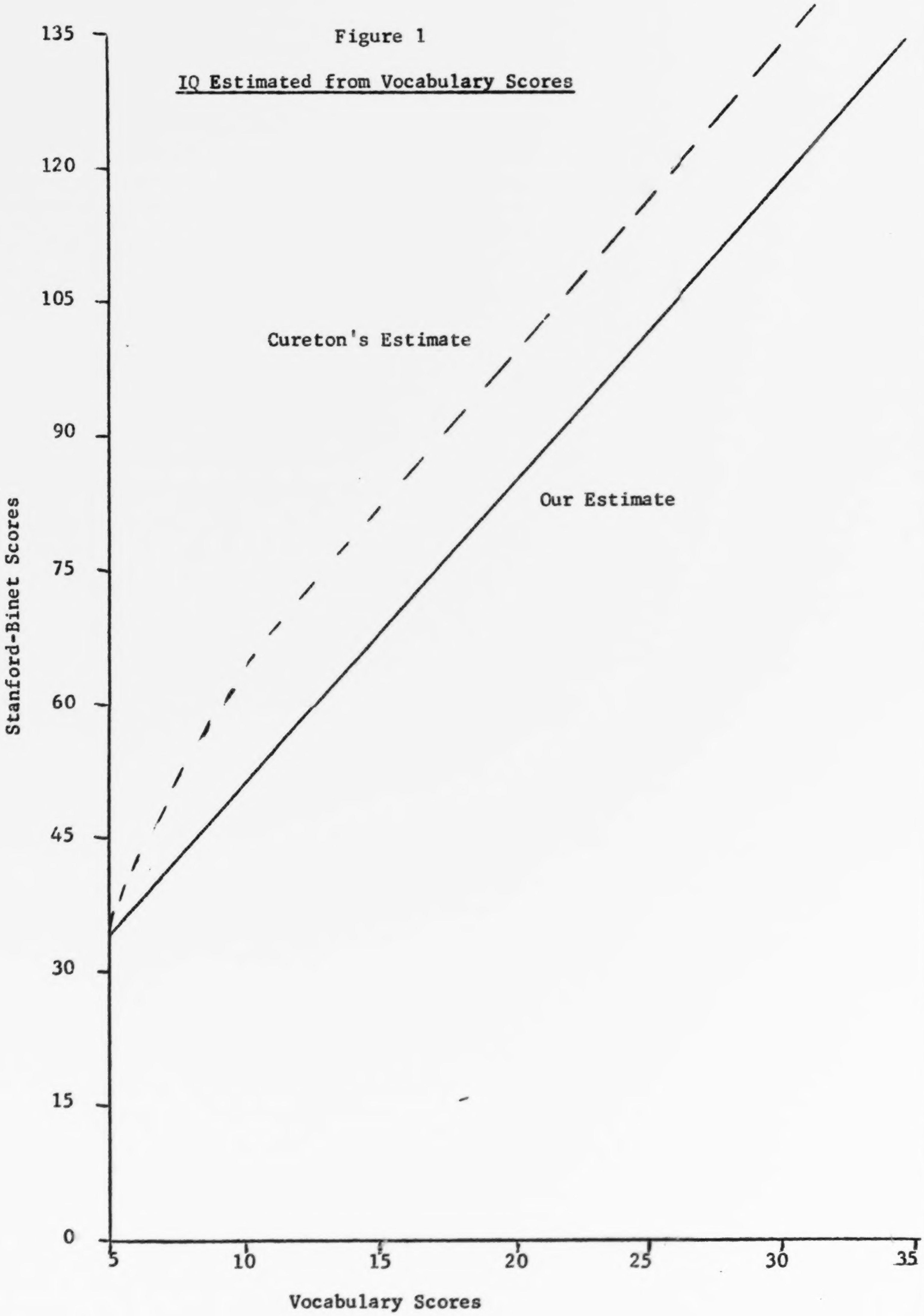
	Estimated IQ			Estimated IQ	
Vocabulary Score	Our Results	Cureton Results	Vocabulary Score	Our Results	Cureton Results
0	18		20	85	98
1	22		21	88	102
2	25		22	91	106
3	28		23	95	109
4	32		24	98	112
5	35	36	25	101	116
6	38	42	26	105	119
7	41	48	27	108	122
8	45	53	28	111	126
9	48	59	29	115	129
10	51	64	30	118	133
11	55	68	31	121	136
12	58	72	32	125	139
13	61	75	33	128	143
14	65	78	34	131	146
15	68	82	35	135	149
16	71	85	36	138	153
17	75	88	37	141	156
18	78	92	38	145	160
19	81	95	39	148	163

Estimates based on the formula: IQ=3.326 x vocabulary score + 18.163.

7/ Cureton, Edward E. Mental Age Equivalents For The Revised Stanford-Binet Vocabulary Test, Journal of Consulting Psychology, 1954, 18:381-383.

Figure 1

IQ Estimated from Vocabulary Scores



The Questionnaire

A questionnaire (PRM-3) was administered to the persons who received Stanford-Binets (see Appendix F). In addition to questions on demography, the interview concentrated on marital satisfaction, family relations, interpersonal and social relations, geographic mobility, job satisfaction, career patterns, educational satisfactions, level of aspiration, psychosomatic indices, and general health conditions. Questions were oriented to elicit a picture of the respondent's self-image and indications of his autonomy or dependency. Pretesting and modifications were carried on over a period of three months. An abbreviated form of this questionnaire (PRM-3A) was used on a subsample as a test of reliability.

For the same sample we attempted to conduct an interview with the respondents' employers. As a large portion of these persons were housewives, and another part were unemployed, we ended up with interviews of employers of 219 subjects. The employer was asked to rate the subject on his abilities, attitudes, and work habits. We tried to find out the quality of the subject's adjustment both to his fellow workers and to his duties, taking care to avoid identifying the subject as mentally retarded if he was, to his employer.

Training of Personnel

The personnel consisted of people with some previous experience and/or training in social science research. All personnel were carefully retrained in the technique of interviewing with special emphasis on techniques for handling resistances in the Puerto Rican culture. The interviewing schedule was carefully gone over with the interviewers, question by question. Each interviewer received a month of supervised interviews of persons not included in the sample before beginning the actual data collection. All interviews were periodically checked for uniformity of administration.

Interviewers were given about one hundred and sixty hours of intensive training in the theoretical background and administration of the Stanford-Binet on the level equivalent to graduate school training in individual intelligence testing.

Each community was interviewed by a team who lived in the community for twelve consecutive days. This association with the community considerably lowered resistance to interviewing and testing.

Study Variables

Retardation was measured by the revised Stanford-Binet Form L. This testing instrument was selected because it is the only intelligence test which has been standardize with Puerto Rican subjects, and it is considered the best single test for the assessment of intelligence among mental retardates. 8/

Subjects who received a vocabulary test but no Stanford-Binet had their test scores converted into estimated IQs on the basis of a formula computed from the test scores of those subjects who had both vocabulary tests and Stanford-Binets (see Table 3).

Those subjects who received neither a vocabulary test nor a Stanford-Binet were classified as probably retarded or probably normal on the basis of the first screening. The overwhelming proportion of subjects so classified were correctly labeled (see Table 1 for exact proportion).

This method of estimating retardation is purely a psychometric method. While we feel that this does not give accurate predictions of the Puerto Rican scene, it is necessary to use such a method to demonstrate its inadequacy.

Success was measured by comparing, for males, the average income during the last five years with the income of other males in the same community. All males whose income put them in the lowest twenty percent in the community were considered unsuccessful. While this method works well for communities with small proportions of retardates, its use in communities composed largely of retardates is open to some theoretical objection. If we were to have, for example, a community composed entirely of retardates - some of our communities actually show more than three quarters of the males retarded - 80 percent of the retardates would automatically be successful. In order to assess the possibility of our results being artifactual, we computed a separate index of success based on comparing the income of the retardates with the lowest 20 percent of the normals in his community. The resulting proportions of unsuccessful retardates were substantially the same (see Table 9). We concluded, therefore, that our original method was a satisfactory measure of success.

8/ G. Orville Johnson and Rudolph J. Capobianco. Research Project on Severely Retarded Children. Special Report to the New York State Interdepartamental Health Resources Board, Albany, N. Y. 1957, pp. 14-15.

We divided our communities into the following six types:

1. Peasant communities - these are farming communities in which the majority of the farmers own their own small parcels of land or are sharecroppers.

2. Plantation communities - these are farming communities composed largely of agricultural workers hired to work other people's land.

3. Rurban areas - these are the urbanized parts of rural communities, small town developed from the surrounding countryside, partly consisting of small farms, and partly commercial. Occasionally upper-middle homes appear in these communities.

4. Urban Slums - These are city areas composed largely of corrugated zinc shacks, often built on stilts over running water that provides sanitary facitilities, generally dilapidated structures in which large families live. They provide no personal privacy.

5. Urban lower and middle class - This is a more stable type of community composed of the respectable poor, semi-skilled and skilled workers, bureaucrats, and small shopkeepers. These are the older parts of the city or new lower class housing developments.

6. Urban middle and upper - Higher priced developments, condominiums, and the more elegant private residences.

Average income tends to get higher as we go from one to six, although on many indices the rurban areas, which include better off people who have stayed within the small town, score higher than urban slums (see Table 4). While this classification is intended to categorize geographic areas, it does much more, for these areas are separated by more than geography. Farm areas in Puerto Rico live in something close to a traditional culture, showing only few signs of moving into the twentieth century. The better parts of the city look like New York and many of the people who live there think like New Yorkers. The distance between these areas is virtually the distance between the traditional and the complex society.

Average Annual Income for Males by Community Type

Community Type	Income (In Hundreds of Dollars)
Peasant	14.9
Plantation	17.0
Urban Slum	19.7
Rurban	20.2
Urban Lower and Middle	27.1
Urban Middle and Upper	58.2

Chapter IV

The Results of the Study

How Many Retardates are there in Puerto Rico?

This study began with the assumption that a purely psychometric definition of retardation would not yield the same results in Puerto Rico as in the United States. Our estimates of the prevalence of retardation among the Puerto Rican population between the ages of 23 and 49 confirmed this assumption. Based on the screening system described in a previous chapter, our best estimate is that 31.6 percent of the population in this age range is psychometrically retarded.

Table 5°

Summary of Studies of the Prevalence of Mental Deficiency

Year	Investigation	Estimated Number of Defective per 1,000 Population
1914	Massachusetts Society for Mental Hygiene	3.54
1915	New York State Commission	4.13
1915	W. E. Fernald	4.00
1915	Porter County (Indiana) Survey	7.35
1916	New Castle County (Delaware) Survey	3.82
1916	C. H. Strong's Investigation of New York Charities	3.40
1917	Nassau County (New York) Survey	5.44
1927	Lewis Study in New England and Wales	8.57 (feebleminded, 6.70; imbecile, 1.52; idiots, 0.35)
1942	Eastern Health District (Baltimore, Maryland)	6.8* 12.2+
1943	Williamson County (Tennessee)	8.9* 16.0+
1956	State of Delaware (present study)	3.8** 20.3++

* Primary diagnosis.
+ Primary or secondary diagnosis
** At 2 per cent level (defective).
++ At 9 per cent level (defective or borderline).

° (Reproduced from Mental Retardation, Joseph F. Jastak, Halsey M. MacPhee, Martin Whiteman, University of Delaware Press, 1963)

This is, in the terms in which retardation is conventionally discussed, an astonishing figure. On the usual assumption of a normal distribution centering on an IQ of 100, and having a standard deviation of 16, only about two percent of the population should be retarded. All of the studies of the prevalence of retardation that we are acquainted with produce results in accordance with the assumption of normality. The above table gives an idea of some typical studies.

While it is possible to show higher prevalences for special so-called high-risk areas, these rates are obtained by isolating the more retarded parts of a larger population. Nowhere is it predicted that a complete population should show a deviation of this order of magnitude from the normal distribution.

Our results do not seem to be an artifact of our sampling method. Russel Greene is, at the present time, standardizing the Spanish adaptation of the Wechsler Adult Intelligence Scale (WAIS) with a Puerto Rican sample. His work is completely independent of ours and uses an entirely different sample. Greene's results seem quite comparable to ours.

The experience of standardizing the WAIS in Puerto Rico is illustrative of the difficulties engendered by trying to apply the usual concepts of retardation to an underdeveloped country. Greene began by taking a sample of twenty people diagnosed as retarded by psychologists and another sample of twenty students from the University of Puerto Rico. The questions of the WAIS differentiated nicely between these two groups. Greene then selected a random sample of 254 Puerto Ricans. He found that the mean for each subtest of the WAIS fell within the retarded score. 1/ While Greene did not analyze for the proportion of the population retarded, it must be above 50 percent. His interpretation was that his sample of retarded subjects must have been misdiagnosed. We prefer the simpler explanation that, on so difficult a test as the WAIS, more than half of the Puerto Rican population will emerge as retarded. Greene, in search of a test that would distinguish between different levels of intelligence among Puerto Ricans, has proceeded to scale down each successive version of the WAIS. We doubt that he has added to the intelligence of the Puerto Rican population.

1/ Russell Greene, The Meaningfulness and the Appropriateness of Projects EIWA, p. 8

There remains the possibility that both Greene's and our results are biased by the high verbal content of the tests used. It is generally assumed that persons of low or borderline intelligence may be markedly lacking in verbal skills, and a highly verbally oriented test may underestimate their intelligence considerably. In order to guard against this possibility, we administered the Raven Progressive Matrices to 25 percent of the persons we tested. The results showed substantially the same proportion retarded (see Appendix B for details). Our estimates are not attributable to the verbal content of the test.

From a psychometric point of view, then, we must conclude that close to one third of the adult population of Puerto Rico is retarded. This is unquestionably a reflection on the use of this type of psychometric standard. As we have explained previously, our use of this definition for retardation did not stem from our approval of it, but rather from the necessity of using it to demosntrate its failure to adequately predict behavior. Further, our use is the conventional usage in the field, and in the absence of such a measure no possibility is presently available for comparing our results with other studies.

Let us, however, consider what our figures would look like on the basis of an alternative definition. More adequate for classifying persons is the recent practice of considering a person retarded only when (1) he is psychometrically retarded, (2) he is socially unable to cope with his environment, and (3) his social inability is attributable to his intellectual deficiency. We cannot apply this standard individually to members of our sample, We can, however, statistically estimate the numbers of persons who would be declared retarded by extending slightly some of the assumptions of our sample. While we lack a measure of social competency for females, we may use for the males the data on income for the past five years that we have used as an index of success as functionally equivalent to the criterion of social competency in this definition.

Of the 24.6 percent of males that we estimate to be retarded, some 29.9 percent are unsuccessful in that their income puts them in the lowest fifth of the population in their community. This leaves us with some 7.3 percent of the males meeting the first and second criteria of the definition. Some of these undoubtedly could be expected to be unsuccessful, even in the absence of any intellectual deficiency.

If we make the further assumption that the proportion of retardates who would be unsuccessful in any event is equal to the proportion of unsuccessful normals, we may disqualify 16.4 percent of the retardates. This leaves us with some 3.2 percent of the male population retarded. Insofar as retardation is at all a useful concept in the Puerto Rican scene, we would consider this figure as the appropriate estimate for retardation among Puerto Rican males. In other words, some 3.2 percent of Puerto Rican males have an intellectual deficiency which presents a problem, to them or to society, sufficient to account for their failures. (see Table 6).

Table 6

Proportion of Males Retarded
by Definition of Retardation

Classification	Proportion
Criterion 1	
Normal	75.4%
Retarded (Psychometrically)	24.6
Criterion 2	
Normal	17.3%
Retarded (Unsuccessful)	7.3
Criterion 3	
Normal	4.1%
Retarded (Failure Attributable to Retardation	3.2

While we find only 3.2 percent retarded in the sense that their intellectual deficiency presents a problem to society, this does not mean that others psychometrically retarded are really more intelligent. The tests do provide a measure of functioning intelligence. What we have is not a breakdown in the testing situation: it is a real lack of intelligence.

If an adult cannot say in what way an apple and a banana are alike or how an automobile resembles an airplane, he is retarded. Scaling the tests down to questions he can answer will not make him more intelligent.

The assumption of a normal distribution of intelligence seems quite adequate for situations in which the overwhelming proportion of the population is given an opportunity to develop its intelligence. It represents the level of expectation for a society which permits normality to develop.

We are confident that testing one-year-olds would show the same normal curve of intelligence for any population. In underdeveloped countries, however, intelligence is not given the same stimulation to develop that more advanced societies allow. As a result, absolute intelligence develops more slowly. The amount of intelligence, relative to persons of the same age in developed societies, which is what IQ tests measure, declines. By adolescence, the pattern may be irreversible. This interpretation is in line with other empirical studies. McCandless 2/ reports:

> "Several studies exist (see McCandless, 1952; Jones, 1954) which demonstrate that children who mature in depressed rural areas, where schools are poor and there is a minimum of stimulation, decline progressively in intelligence as they grow older. Studies of Tennessee mountain children reported by Wheeler (1942) demonstrate the effect of a barren environment on children's intellectual development, yet contrast current tendencies with the more depressing picture that existed ten years before he gathered his data. In 1930, six-year-olds from this region tested an average 95 IQ. In 1940 they tested an average 103. Older children tested lower, both in 1930 and 1940, than six-year-olds, so that in 1930 sixteen-year-olds averaged only 73.5; in 1940, 80.

2/ Boyd R. McCandless, Relations of Environmental Factors to Intellectual Functions. In: Harvey A. Stevens and Rick Heber, (eds.): Mental Retardation: A Review of Research, Chicago University of Chicago Press, 1964.

> "This study is representative of many which demonstrate that prolonged residence in a depressed socio-economic-educational environment retards measured intelligence and that, despite the warnings of geneticists, children tend to measure higher in intelligence from one decade to another."

While we have no data on the intelligence of infants in Puerto Rico, Roca's standardization of the Stanford-Binet on a population of Puerto Rican children between the ages of six and fourteen tends to support this interpretation (see Table 7). He finds close to 8.9 percent retarded, using a Spanish version of the Stanford-Binet which follows the English version closely. His figure is probably somewhat lower than a true figure since his sample was drawn from the school population, but the age group is young enough so that the error due to school drop-outs should be comparatively small. His figures are close enough to the normal curve to suggest that the effects of living in an underdeveloped country have not yet been fully felt by this group.

Table 7 °

Intelligence Quotients Equivalents in the
Stanford-Binet Scale, Revised, for
Puerto Rico and the United States

Probable Error	Percent	Classification	Puerto Rico 6 - 14 yrs.	United State* 9 - 12 yrs.
+ 3 — ...	2.2	Very Superior	133 +	138 +
+ 2 — + 3	6.7	Superior	121 - 132	126 - 137
+ 1 — + 2	16.1	High Average	109 - 120	116 - 125
+ 1 — - 1	50.0	Average	94 - 108	92 - 115
- 1 — - 2	16.1	Low Average	72 - 83	80 - 91
- 2 — - 3	6.7	Inferior	60 - 71	71 - 79
- 3 — ...	2.2	Very Inferior	59 or less	70 or less

* See David Wechsler, The measurement of Adult Intelligence, p. 227

° (Reproduced from: Pablo Roca, *Escala de Inteligencia Stanford-Binet Revisada*: *Direcciones para la Administración de la Forma L.* Editorial del Departamento de Instrucción Pública, San Juan, Puerto Rico, 1953.

In short, we would argue that findings in depressed areas, despite the fact that these are selected parts of a larger population, are applicable to the total population of underdeveloped nations. The general failure to find results comparable to ours is largely the failure to undertake similar studies. While the picture in Puerto Rico compares favorably with the findings in depressed areas, it is not difficult to find countries in the world where the average IQ would be considerably lower.

While we attribute the bulk of retardation in underdeveloped countries to the lack of opportunities, we should not fall into the error of thinking that the retardation is somehow, since it may be explained, not real. Whatever its genesis, the retardation we are speaking of is an actual inability to function intelligently. It means that we are dealing with adults who cannot answer questions which we expect a seven-year-old to answer. While the adult may be able to hoe a field or do all manner of other things that the child cannot, this is not necessarily intelligence.

The notion that retardation which is attributable to cultural deprivation is not real has been almost formalized in the use of the word pseudo-retardation to describe this situation. We think this is a serious error. The retardation, however unfortunate, is anything but pseudo. We much prefer to restrict the concept of pseudo-retardation to persons who have the intellectual ability to obtain high scores on psychometric tests, but whose psychological problems interfere with their functioning to the point where they present the appearance of retardation.

The Distribution of Retardation

Within our sample, women show considerably higher prevalence of retardation than men. This does not seem attributable to less education, as the women have spent as much time in school. Nor do we have any reason to feel that the notorious biological differences between men and women are a contributing factor. It seems likely that the restricted environment which is the pattern for women in rural and urban slum areas is the main cause of retardation. In any event the disparity in prevalence rates disappears in the middle and upper class areas (see Table 8).

Table 8

Estimated Proportion Retarded
by Community Type and Sex

	Estimated Proportion Retarded		
	S E X		
Community Type	Male	Female	Total
Peasant	43.0%	53.9%	50.6%
Plantation	42.9	70.4	60.5
Urban Slum	22.6	36.3	29.6
Rurban	15.7	31.1	24.1
Urban Lower & Middle	14.8	15.9	15.0
Urban Middle & Upper	*	*	1.9
TOTAL	24.6%	37.0%	31.6%

* Bases too small for calculation
Estimates are based on applying percentage failing the Stanford-Binet to persons in that classification on basis of screening level.

The most conspicuous difference in prevalence rates is that between different types of communities. For farm communities, over half the persons tested show psychometric retardation. Prevalence falls to about 30 percent in the urban areas and in the urban slums. Both of these areas contain large numbers of people born on the farm. However, it tends to be more active in intelligent people who have moved to this area, and that they are exposed to a far more stimulating environment than can be found in farm communities. Within the parts of the cities where the stable working class and the middle class reside, the retardation rate drops to 15 percent. In the better parts of the city, the retardation rate is less than 2 percent. This rate is comparable with the rates ordinarily found in industrialized societies.

These vast differences in rates from one part of the country to another support the explanation of retardation as caused by cultural deprivation. Those types of communities which are most traditional show good parts of the population to be retarded. Areas which are transitional between traditional and complex cultures show intermediate rates. The communities which most resemble complex societies show prevalence rates characteristic of complex societies.

The overall rate, then, while reasonably accurate for this point in history, is acutely temporary. The society of Puerto Rico is changing rapidly. Urban areas are overflowing into the countryside. The landscape changes almost daily. While these changes will have only minimal effect on the adult population, the younger generation is living through a series of experiences far different from those faced by their parents. It would be hazardous to predict any accuracy for the retardation rate for the next generation; there is little doubt that it will be considerably lower. It should be something in the order of magnitude of the 8 percent rate found by Roca (see Table 7). It is a question of time until retardation rates in Puerto Rico fall to the 2 percent level. Once industrialization has started, progess is irreversible.

The Effect of Intelligence on Success

As Table 9 indicates, retardation reduces a person's chances for success. This reduction is nowhere in the order of magnitude naively imagined. The vast proportion of retardates can be considered successful according to virtually any criterion. If we take as our standard the income level which corresponds to 20 percent of the community as the cutoff point, close to 30 percent of the retardates fall below this line, as compared to 16.4 percent of the normals. Roughly, we may say, a retardate is almost twice as likely to fail as a normal.

This ratio does not seem to be an artifact of our methods of measurement. If we use as a cutoff point 20 percent of the normal community, the proportions unsuccessful among both normal and retarded groups are slightly higher, but the ratio remains the same. Low intelligence, then, is a handicap, though it is not an insurmountable one in this society.

Table 9

Proportion of Males Unsuccessful by Retardation and Measure of Success

	Proportion Unsuccessful	
	Measure of Success	
Retardation	20% of Community	20% of Normal Community
Retarded	29.9%	36.9%
Normal	16.4%	20.0

While retardation is a disadvantage, it is not equally handicapping in all types of communities (see Table 10). In peasant and plantation communities the handicap is apparent statistically, but is small enough not to be noticed on an individual basis. About 25 percent of the retardates are unsuccessful, where about 20 percent would be expected by chance. This suggests a community in which retardates are generally not distinguished from the rest of the population, the slightly higher rates of failure being the result of the few profoundly retarded who can be identified. For the mildly retarded, his chances are about the same as any other person in his social class.

Table 10

Proportion of Male Retardates Unsuccessful by Community Type

Community Type	Proportion Unsuccessful
Peasant	22.0%
Plantation	26.0
Urban Slum	35.1
Rurban	41.6
Urban Non-Slum	40.0

Criterion of success is an income for the last five years comparable to the top 80% of the community in which the person resides.

The rate of failure rises steadily as we move from traditional to complex societies. In the urban non-slum areas about 40 percent of the retardates are unsuccessful. The position of retardates relative to normals is clearly much worse. Retardates now have almost an even chance of finding themselves in the lowest 20 percent of the community. This does not mean that they are earning less money than retardates on the farm. Rather, the normal members of the community are earning much more money than the normal members of farm communities. The retardate's income has not kept pace with the advancing income of the normal's. Within a complex society, the retardate is identified as such and is likely to have access primarily to those jobs which normals are not interested in. While this is certainly not true of all retardates, even in the complex society, the odds are now pretty heavily stacked against the retardate.

The position of the retardate emerges more clearly if we measure several levels of success simultaneously (see Table 11). The proportions of retardates at various levels of comparative income suggest that the more complex the type of community the lower the comparative salary level in which retardates are clustered. For salary levels comparable to the lowest tenth of the normal community, some 20 percent of the retardates in farm communities and urban slums are concentrated. Within urban and urban non-slum communities, about 30 percent of the retardates can be found at this lowest level. For plantation and urban slum communities, retardates cluster at income levels comparable to the 11 to 20 percent level for normal. In peasant communities a heavy concentration of retardates is found enjoying an income comparable to the 31 to 40 percent income level for normal. In peasant communities, then, retardates, while slightly less successful than normals, are not conspicuously so. A retardate with a little bit of luck can expect to do better than an unlucky normal. In the more complex type of community it is the rare retardate who is really in the competition.

While we have thus far examined the effect of intelligence only in terms of retardation or normality, it is worth looking at the data for those respondents for whom we have intelligence scores. For this

Table 11

Proportion of Male Retardates Unsuccessful
by Community Type and Level of Success

	Proportion Unsuccessful			
	Level of Success			
Community Type	0-10%	11-20%	21-30%	31-40%
Peasant	20.6%	2.2%	16.9%	22.1%*
Plantation	20.0	19.5) *	10.3	13.5
Urban Slum	20.2	19.2)	10.6	11.7
Rurban	32.5) *	12.0	12.6	11.7
Urban Non-Slum	28.0)	20.0	18.0	10.0

* Proportion higher than expected by chance.
Levels of success calculated by income of normal community.

purpose, we can use Stanford-Binet scores or Stanford-Binet equivalents for those persons for whom we have vocabulary scores. As Table 12 demonstrates, success is directly related to intelligence. For persons with intelligence quotients of 55 or less, 37.5 percent are unsuccessful. As we proceed up the intelligence scale, the proportion unsuccessful drop, until, for persons with IQs over 100, only 13.7 percent are unsuccessful, This general tendency for increasing intelligence holds for every type of community (see Table 13). However, the proportions unsuccessful vary considerably. The more advanced the community, the more difficult it is for persons of lower intelligence to succeed. In peasant and plantation communities persons with IQs of 55 or less show a failure rate of 32 percent, still not seriously higher than would be expected by chance. Within the urban-slum and urban areas corresponding groups show a failure rate of about 50 percent. In the urban non-slum areas the rate for this group has risen to close to 60 percent. For retardates the competition in this type of community is clearly much more difficult. The proportion of failure for this type of community shows the degree to which intelligence is a requisite for success in more complex communities. Even low-normal persons, with IQs of 86 to 100, show a rate of failure over 30 percent. It is not only the retarded who are handicapped in a complex society; even dull-normals have a hard time of it. In general, the figures substantiate the notion that complex societies are much more differentiated than traditional societies.

Table 12

Proportions of Males Unsuccessful
by I.Q.

I.Q.	Proportion Unsuccessful
Under 56	37.5%
56 - 70	33.3
71 - 85	27.0
86 - 100	19.3
Over 100	13.7
TOTAL	26.3%

I.Q. is based on the Stanford-Binet or on a Vocabulary Test. Criterion of success is an income for the last five years among the top 80 percent of the community in which the person resides. The table is based on males for whom we have a Stanford-Binet or Vocabulary Test, hence includes a disproportionate number of retardates.

While the position of retardates gets progressively worse in complex societies, this does not mean that their position is absolutely worse. As Table 14 indicates, the situation is somewhat more complicated. The advances in income characteristic of complex societies do not seem to have percolated down to the retardate. Retardates in the urban non-slum area as a group, earn slightly more than retardates on the farm, but the differences are small. Where incomes for normals in the non-slum show a marked rise above subsistence levels, the retardates are still struggling to avoid starvation. One can say without too much exaggeration that retardates, even in the city, are still living on the standards of the traditional society.

Table 13

Proportion of Males Unsuccessful
by I.Q. and Community Type

	Proportion Unsuccessful			
	Community Type			
I.Q.	Peasant & Plantation	Urban Slum	Rurban	Urban Non-Slum
Under 56	32%	48%	50%	*) 58%
56 - 70	25	36	48	*)
71 - 85	27	20	28	41
86 - 100	7	20	24	32
Over 100	7	23	18	9

I. Q. is based on the Stanford-Binet or on a Vocabulary Test.
Criterion of success is an income for the last five years among the top 80 percent of the community in which the person resides.
The table is based on males for whom we have a Stanford-Binet or Vocabulary Test, hence includes a disporportionate number of retardates.
* Numbers too small to provide meaningful proportions.

Table 14

Average Annual Income for Males
by Community Type and Retardation

	Retardation	
	Retarded	Normal
Community Type	Income (in hundreds of $)	Income (in hundreds of $)
Peasant	11.3	18.5
Plantation	12.8	20.5
Urban Slum	15.7	20.6
Rurban	13.8	21.6
Urban Lower & Middle	15.0	29.2
Urban Middle & Upper	*	58.6

* Base too small for calculation.

However, the distribution of the small income earned by retarates in the urban non-slums has changed considerably. Both successful and unsuccessful retardates earn more than on the farm, but the proportion of unsuccessful is higher (see Table 15). While the successful retardate has by no means gotten a proportional share of the benefits of industrialization, he does enjoy an average income appreciably better than successful retardates on the farm. The competition is fiercer, but the prizes are higher. Needless to say, this offers no consolation for the unsuccessful.

Table 15

Average Annual Income for Males
by Community Type, Retardation, and Success

	Retardation			
	Retarded		Normal	
	Success		Success	
Community Type	Unsuccessful Income (In hundreds of $)	Successful Income (In hundreds of $)	Unsuccessful Income (In hundreds of $)	Successful Income (In hundreds of $)
Peasant	1.1	14.2	2.6	22.0
Plantation	3.1	16.3	3.4	23.4
Urban Slum	4.3	21.8	5.8	23.6
Rurban	4.9	20.7	6.9	25.3
Urban Lower & Middle	3.5	24.2	5.7	33.3
Urban Middle & Upper	*	*	19.0	64.1

* Bases too small for calculation

8

Unsuccessful normals regularly do better than unsuccessful retardates. Their position is not enviable, even in a complex society. While they are not progressing at the same rate as the successful, their position does seem to be improving absolutely, if not relatively.

The Effect of Education

As might be expected, better educated people have higher probabilities of success. For persons with no schooling, close to 40 percent are unsuccessful. The failure rate drops consistently with greater education. For high school graduates, the failure rate is less than 5 percent.

Table 16

Proportion of Males Unsuccessful by Education

Education	Proportion Unsuccessful
None	39.5%
1 - 4 years	30.5
5 - 8 years	24.0
9 - 12 years	15.4
13 years or more	4.5

I.Q. is based on the Stanford-Binet or a Vocabulary Test.
Criterion of success is an income for the last five years among the top 80 percent of the community in which the person resides.
The table is based on males for whom we have a Stanford-Binet or Vocabulary Test, hence includes a disproportionate number of retardates.

Education, however, is not a completely independent variable. It is highly correlated with intelligence. In order to get some idea of the effect of education, we shall have to control for intelligence. When this has been done, we can see that intelligence and education each contribute to an increase in the probability of success. The higher the intelligence, however, the more likely it is that an increase in education will lead to an increase in the probability of success. For retardates with four years or less of education, the rate of failure is 37.4 percent. With more education, the rate for this group drops down to about 30 percent. For persons with IQs of over 85, the effects of education are more dramatic. Persons with 0 - 4 years of schooling have a failure rate of 27.8 percent, about the same rate as better educated retardates. With more education, people with IQs of over 85 have a failure rate of 13.6 percent.

Table 17

Proportion of Males Unsuccessful by I.Q. and Education

I. Q.	Proportion Unsuccessful Education 0 - 4 years	 5 or more years
Under 71	37.4%	30.6%
71 - 85	26.5	26.9
Over 85	27.8	13.6

I.Q. is based on the Stanford-Binet or on a Vocabulary Test.
Criterion of success is an income for the last five years among the top 80 percent of the community in which the person resides.
The table is based on males for whom we have a Stanford-Binet or Vocabulary Test, hence includes a disproportionate number of retardates.

Education, however, has different effects in traditional and in complex societies. In the traditional society, as indicated by results for rural areas, higher education makes no appreciable difference in the success rate except for persons who already have a high degree of intelligence. This is not surprising, since most of the jobs in these communities require little educational background. Nor have these communities reached the degree of sophistication characteristic of complex societies which require an educational background for jobs which make no use of education.

In the urban areas education makes a difference even for the retarded. Retardates with four years or less of schooling have a failure rate of about 50 percent. For retardates with more schooling the failure rate drops to 30 percent. While this rate is still higher than should be expected by chance, it is certainly significantly better than enjoyed by the uneducated retardate. The benefits of more schooling are, of course, enjoyed by persons of higher IQs also.

Table 18

Proportion of Males Unsuccessful
by I.Q., Education, and Community Type

	Proportion Unsuccessful			
	Community Type			
	Rural		Urban	
	Education		Education	
I. Q.	0 - 4 years	5 or more years	0 - 4 years	5 or more years
Under 71	28%	27%	52%	30%
71 - 85	28	25	25	22
Over 85	17	23	31	18

I.Q. is based on the Stanford-Binet or on a Vocabulary Test.
Criterion of success is an income for the last five years among the top 80 percent of the community in which the person besides.
The table is based on males for whom we have a Stanford-Binet or Vocabulary Test, hence includes a disproportionate number of retardates.
Urban classification includes rurban communities.

Psychological Variables

We hypothesised psychological differences between normals and retardates, clustering around the self-image. The society teaches the retardate an identity as a retardate, in the process giving him a more negative self-image than the normal enjoys. This comparatively negative self-image, in turn, leads to further consequences.

As an indication of self-image, we asked our respondents to name several favorable characteristics in a person of his own sex. A significant proportion of our respondents, particularly among retardates, found this task too difficult to complete. We further asked each respondent whether he possessed each characteristic he named. Persons claiming to possess each favorable characteristic, even where he could not name five, were considered to have a favorable self-image.

Table 19

Proportion with High Self-Image
by Community Type, Retardation, and Success

Classification	Proportion with High Self-Image	
Total	61.7%	
Rural	55.2)	*
Urban	68.3)	
Retarded	57.0)	*
Normal	70.2)	
Rural Retarded	51.0)	*
Rural Normal	66.7)	
Urban Retarded	61.0)	*
Urban Normal	71.5)	
Retarded Unsuccessful Male	53.2	
Retarded Successful Male	51.3	

* Difference is significant at .05 level
Urban classification includes rurban communities.

Over 60 percent of our respondents had a positive self-image, judged on the basis of this measure. The distribution, as expected, was quite unequal. Urban areas showed significantly higher proportions of persons with positive self-images. Normals showed more positive self-images, in both rural and urban areas. Our hypothesis that retardation is associated with negative self-images seems to be sustained, although even for retarded, most self-images seem positive by this measurement. It seems probable that this technique of measurement overestimates positiveness of the self-image.

Table 20

Proportion Perceiving Self As Healthy by Community Type, Retardation, and Success

Classification	Proportion Perceiving Self as Healthy
Total	69.7%
Rural	60.5) *
Urban	78.8)
Retarded	60.8)
Normal	86.2) *
Rural Retarded	54.5)
Rural Normal	77.6) *
Urban Retarded	66.3)
Urban Normal	90.0) *
Retarded Unsuccessful Male	45.2)
Retarded Successful Male	75.4) *

* Difference significant at .05 level.
Urban classification includes rurban communities.

In general, we expect a positive self-image to manifest itself as a healthy body-image. This is in line with the experience reported in The American Soldier, where a series of questions originally designed to test for physical difficulties turned out to discriminate between normals and neurotics. In any event, the answers to the question "Would you say your health is very good, good, regular, or bad," while open to non-psychological explanations, can be assumed to also be tapping a psychological variable. The number of persons answering "good" or "very good" was taken as an index of a positive self-image. All differences were significant and in the expected direction (see Table 20).

While it might be reasonable to consider that urban subjects, normals, and successful retardates enjoy better health than their counterparts, the question is sufficiently generally phrased so that the answer can be assumed to reflect, generally, feelings of well being. The results tend to support the identification of retardation with a poor self-image

On the basis of our hypotheses on the nature of retardation, we argued, further, that in community situations in which the family and the community attitudes label a person as retarded, he is likely to develop a dependent self-image which will interfere with vocational adjustment. We hypothesized that the negative self-image would appear as an inability to take advice. One cannot, of course, go around asking people whether they can take advice and hope to get answers. We did, however, ask, for a number of situations, whether or not our respondents received advice. We took the proportion receiving advice in any particular group as a measure of that group's ability to take advice.

About 35 percent of our sample reported receiving some help in finding a job (see Table 21). The urban group reported a slightly, but not significantly, higher proportion receiving help. Normals reported a considerably higher proportion than retarded in both rural and urban area. The successful retardate was similarly more likely to have received help in finding a job than the unsuccessful retardate. This measurement, however, is open to several interpretations in addition to the psychological one. One may expect those people who have had help in finding a job, all other things being equal, to be more likely to have found a job. Our successful and unsuccessful groups are largely defined by the fact that the former have found good jobs. While we have not defined the retarded and normal groups in this fashion, there does exist a clear differential.

Despite the possibility of explaining these results in non-psychological terms, the general agreement between these and other measures of the ability to take advice suggests that the psychological explanation is tenable.

Table 21

Proportion Receiving Help in Finding a Job
by Community Type, Retardation, and Success

Classification	Proportion Receiving Help	
Total	34.2%	
Rural	29.5	
Urban	36.7	
Retarded	28.3)	*
Normal	45.2)	
Rural Retarded	22.1)	*
Rural Normal	50.0)	
Urban Retarded	32.3)	*
Urban Normal	43.5)	
Retarded Unsuccessful Male	37.0)	*
Retarded Successful Male	59.2)	

* Difference significant at .05 level.
Urban classification includes rurban communities.

The proportion receiving financial help shows some of the same trend. Over 60 percent of our respondents reported receiving some financial help (see Table 22). The percentage was significantly higher in urban than in rural areas and in normal than in retarded groups. Again, these figures are open to some criticism on the basis of connection with non-psychological factors. But in this case we would expect the opposite results from the real situation. Retardeds are more likely to need financial help than normals. Yet they get less of it. Their comparative lack of financial help must be based on their inability to get it rather than on their lack of need.

Table 22

Proportion Receiving Financial Help
by Community Type, Retardation, and Success

Classification	Proportion Receiving Help
Total	61.2%
Rural	52.3)
Urban	66.0)
Retarded	58.4)
Normal	66.4)
Rural Retarded	48.9
Rural Normal	61.8
Urban Retarded	64.6
Urban Normal	68.1
Retarded Unsuccessful Male	41.3
Retarded Successful Male	34.2

* Difference is significant at the .05 level.
Urban classification includes rurban communities

In any event, the more general question of who receives advice is perhaps best suited for tapping psychological responses. Advice, in general, is not closely tied to a job or a financial situation. It would seem a priori to offer the most fertile field for psychological explanation.

Close to 90 percent of our respondents report having received some sort of advice or other (see Table 23). The proportion in urban areas is slightly higher, but not significantly so. Normals report a significantly higher proportion receiving advice than retardeds. Interestingly enough, the difference between normals and retardeds is significant in urban areas but not in rural areas. It might very well be that the type of advice received on urban areas is different than that received in rural areas, urban advice being a factor in occupational adjustment, while rural advice is less necessary, the situations in the rural environment making less demands upon the individual. This possibility is, of course, speculative since we have no information upon the content of the advice received.

Table 23

Proportion Receiving Advice
by Community Type, Retardation, and Success

Classification	Proportion Receiving Advice
Total	88.2%
Rural	86.4
Urban	89.2
Retarded	86.3) *
Normal	91.9)
Rural Retarded	85.8
Rural Normal	88.2
Urban Retarded	86.6) *
Urban Normal	93.2)
Retarded Unsuccessful Male	89.1
Retarded Successful Male	80.3

* Difference is significant at .05 level.
Urban classification includes rurban communties.

In general, we found variables relating to the self-image distinguishing rural and urban communities, between normal and retarded groups, and between unsuccessful and successful retardeds.

What distinguishes the retarded from the normal, then, can be viewed as the ability of the normal to adjust to an urban, complex society as compared with the comparative inability of the retarded to make this adjustment. Similarly, the successful retarded is characterized by his similarity to normals in this respect.

The general tendency of all of these indices of self-image to produce differences in the predicted direction seems to support the hypothesized relationship between community attitude, psychological variable, and retardation.

Chapter V

Implications of the Research

One of the authors of this report is a consultant for the Child Development Center under the auspices of Project Headstart. One of the teachers in the Center complained about a four-year-old, whom we shall call Samuelito. She wants the psychologist's help because Samuelito is an extremely aggressive child. If he is playing with a toy and another child approaches him, Samuelito gets very belligerant, hitting the other child and pushing him away. If the teacher interferes, he strikes out at her and bites her. Most of the time Samuelito is unable to relate with the other children around him. He is more prone to make enemies than friends. Quick of temper, he has little tolerance for frustration and is easily moved to fight back at whatever frustrates him. The teacher claims that he learns easily what he is taught; but his behavior astounds her. With the best of intentions, she definitely does not know what is wrong with this child.

The social history reveals that Samuelito is the sixth of eight offspring. His father is sixty-odd years old, and has been unemployed for the past ten or more years. The only support of the household is his mother, who works as a domestic servant in the nearby military camp. The family lives not in a house, but underneath a house, in a slum area.

We tested Samuelito; he tests within the normal range. Without the adequate life chances, what would happen to Samuelito? In all probability, he will turn out to be, like three of his older siblings, either a mental retardate or a schizophrenic engaged in delinquent behavior. This is Samuelito, coming from a deprived environment.

What has happened to Samuelito? The situation was interpreted to his teacher. A therapeutic program was formulated. In the four months that Samuelito has been at the Center, significant changes have already occurred in his behavior. For one thing, Samuelito perceives his environment as somewhat less hostile. He has not changed completely, but he is beginning to learn how to relate to other people; a bare beginning, but he is on his way. The world is starting to take on a new meaning for him.

Our study concerns itself with two main questions: what is the prevalence of mental retardation in the population and how well the retardates do compared to other people. Our investigation of the number of retardates led us to the conclusion that the proportion of retardates decreased as the society became more complex. In these terms, the problem of retardation, even if it won't go away by itself, will certainly decrease in size if left alone. This should not be taken to mean, however, that leaving it alone is the only alternative. Samuelito proves that it is possible now to do something to lower the retardation rate, at least by one.

The problem for our society is to do on a large scale what we have managed to do for Samuelito. We must see that all children get an opportunity for stimulation in their formative years, when they are three and four years old. For the middle and upper classes, this will make little difference; for the lower classes, it is a necessity. It requires some temerity to make this suggestion in a country where there are not enough schools or teachers at present to handle people who are legally required to be in school. We have no magic methods for producing more schoolrooms and teachers. If a choice has to be made, we would suggest the allocation of rooms and teachers to pre-kindergarten schools, skimping, if necessary, on the upper grades.

We are aware that what we are suggesting is adding another burden to an already overburdened school system. We have already commented on the tendency of complex societies to turn over to the school system whatever jobs other institutions have failed to carry out. We are guilty of the same sin. In all honesty, however, we can find no other institution remotely equipped to serve as patsy.

If, on the one hand, we do not have to wait for progress to reduce the retardation rate, neither do we have to sit back and wait for progress to come when it will. The modern generation is not a patient one and it is least of all inclined to wait for economic development. There are sufficient examples of nations deliberately planning for economic progress; Puerto Rico's Operation Bootstrap is one of the more conspicuous among the successes. However, the job is by no means done. The authors are no experts on economic matters. We have no practical suggestions on how to achieve progress. Nor would we suggest that the reduction of the retardation rate is one of the major reasons for achieving progress. It will, though, be an agreeable by-product.

The other major question touched on by this study is the fate of retardates. We have suggested that the retardate is relatively worse off in more complex societies. While this is empirically true, it will remain so only if we are content to allow it. In a more complex society, retardates need more help. But there is no reason why retardates should not be given sufficient help to permit them to compete with normals with some reasonable chance of success. In this area, also, present day techniques, if they were widely applied, appear sufficient to achieve our goal. Where vocational rehabilitation has been given to retardates it has been, on the whole, successful. Unfortunately, rehabilitation has too often been seen as a therapeutic rather than a preventive method. There is no reason to wait until a retardate is in the job market to offer him training. A program of habilitation which pays more than lip-service to the concept of total personality should start early enough in the retardate's life to avoid the irremediable damage of constantly competing, at a disadvantage, with normal peers.

We do not consider it our job, in this chapter, to map out specific recommendations for dealing with retardates; we have done so within the area of vocational rehabilitation in the Counsellors Guide which forms a part of this report. We do feel that retardates can be helped, if there is a will to do so.

Chapter VI

Summary

The study was designed to investigate the distribution of retardateds in Puerto Rico and to test the hypothesis that retardation could be explained as a process consisting of the community and family identifying the retardate and giving him a negative and dependent self-image, which leads him to an inability to take advice, a low tolerance of frustration, and emotional instability.

Starting with a random sample of households in Puerto Rico, the survey obtained occupational and educational information on all persons between the ages of 23 and 49. Persons with a tenth grade education and/or employment as proprietors, managers, or sales or clerical persons were classified as probably normal. Testing of a group of these showed less than 3.0 percent retarded. Persons not meeting these criteria, hence considered probably retarded, were administered a vocabulary test. A score of 18 or better was considered indicative of normality. Of the persons with this score, over 80 percent of those tested had an IQ over 70. Of the persons with a vocabulary score under 18, over 80 percent of those tested had an IQ of 70 or less. The screening method was evaluated as adequate for the study of groups.

Projecting results upward, we estimated the retardation rate for Puerto Rican adults at 31.6 percent. This rate varied considerably by type of community, farm communities showing over 50 percent retarded, the rate falling as more industrialized areas were considered, until the 1.5 percent rate in the urban middle and upper class. The retardation appeared a function of the position of the community along the continuum from a traditional to a complex society. The overwhelming proportions of retardates in Puerto Rico are the result of cultural deprivation.

While the number of retardates falls with increasing industrialization, the remaining retardates are in a worse position relative to normals. The income of retardates has improved slightly, if at all, with industrialization, while the income of normals has increased appreciably. While the successful retardate in the complex society earns more than the successful retardate in a traditional society, the proportion successful has dropped from 75 percent to 60 percent.

Measures of the self-image show that self-image is more negative in rural areas and among retarded. The negative self-image carries over into an inability to take advice. The consistent pattern of results tends to support the hypothesized process.

Appendix A

Work on Mental Retardation in Puerto Rico

We have deemed convenient, subject to the obvious limitations pertaining to ventures in a new field, to make an inventory of existing facilities, publications, work accomplished, and operating criteria as regards the problem of mental retardation in Puerto Rico. The scarcity of materials, reflecting the paucity of research in this field in the Island, together with the fact that agencies, both private and public, dealing with the problem have little data filed on their work, made our task a most difficult one.

There has been little organized study of the attitude toward retardates in Puerto Rico. An attitude toward a group, of necessity, requires the ability to identify the group. Generally, in rural and poorer areas, it is the organic or profoundly retarded who is recognized as different. The educable mental retardate, which constitutes the largest number in the general and school population, is hardly ever recognized by either layman or professional.

As concerns the profound or organic retardates, we found three main clusters of attitudes towards them. In general, there was a good deal of sympathy for the retardate. While the retardate is, perhaps, less pitied than the "loco" (the psychotic), this is still the predominant attitude toward the group as a whole.

Any particular individual of the group, however, might be subject to a good deal of ridicule. Traditionally, the community had made the "bobo del barrio" along with the "loco del vecindario" 1/ the object of scorn and jesting, an outlet for the people's

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1/ "Bobo" is the expression used by most people to describe the profound mental retardate, who is considered to be a simpleton. The phrase, "Bobo del barrio", can be translated as "The town's simpleton." The phrase, "Loco del vecindario," is the town's "crazyman," whose main difference from the simpleton is that one must be fearful of the "loco's" uncontrolled aggression, whereas the simpleton is the butt of practical jokes.

jocular or aggressive remarks.

Then, too, there are some indications that the retardate is considered a person of little worth. Comments such as "El bobo no sirve pa' ná" are common. In general, the "bobo" is perceived as one who doesn't know what is going on, neither suffers nor bothers anyone, and depends on others to provide for him.

There is also a good deal of suspicion that the "bobo" is not nearly as stupid as he makes out to be. There is always the possibility that he is using "jaibería" 2/ to con other people into providing things for him which he is too lazy to get for himself. This distrust is evident in such statements as "el se hace el bobo pero no es bobo ná;" "ese es más listo de lo que parece;" "bobo y tó, siempre se sale con la suya."

The most important collective expression of the mental retardate in Puerto Rico has been that of Juan Bobo, our most popular folklore character, illustrative of a relative incapacity to assimilate the gradual but constant pressures of social and economic development.

According to Dr. Francisco Manrique Cabrera, the Juan Bobo legends of earlier times centered about a figure who was really a fool. In the course of telling and retelling, the stories began to incorporate the experiences of the peasants in trying to cope with a constant press of social development. Increasingly, our hero became more roguish to the point where the simpleton grew into a Juan who pretends to be foolish, using foolishness as a mere

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2/ Coloquialism for slyness. The "bobo" is, at times, perceived as a sly person, who acts the role of a simpleton in order that he be not punished for behaving contrary to the norms of the society.

facade. Thus, he usually ends up marrying the King's daughter or taking the money away from the thieves. In its evolution, the Juan Bobo type, concludes Dr. Cabrera, "seems to have assimilated a peculiar trait of peasant psychology: la jaibería, a roguish simulation aimed at deceiving whoever gets close." This personage is today crystallized around such popular TV characters as Vale Cuatro, Tetrarquina, La Jiribobia, Pandoblao, and Simpli.

Publications

The first publication in Puerto Rico directly mentioning mental deficiency is an 1888 work by Dr. José Rodríguez Castro, Enajenados y Manicomios. It stresses the need for an institution for mental patients "up to the standards that civilized people deserve." It summarizes the state of knowledge on mental diseases prevalent in an epoch which he conceives as transitory. Its descriptions offer "something on how the brain functions, be it on its state of health or else of disease, or on its physiological or pathological state," following the lead of related studies conducted by J. Luis. He conceives the process of learning as one of imitation. Its summary of the then prevalent definitions concerning mental diseases shows that mental deficiency was taken as one more mental disease. Rodríguez Castro ends by reproducing the systems then used to classify mental diseases, including under diverse labels the various types of mental deficiencies: cretinism, stupidity, oligophrenia, imbecility, and idiocy.

The next publication, La Debilidad de la Mente y su Influencia en Nuestro Organismo Social, based on a lecture delivered by Dr. Francisco del Valle Atiles at the Insular Library, appeared in the Bulletin of the Puerto Rican Medical Association for March - 1915. Del Valle attributes extraordinary importance to the laws of heredity, suggesting the need to sterilize the mentally deficient to arrest their further reproduction. His detailed version of Mendelian laws leads to the remark that "the study of the laws of individual inheritance allows us to establish with certainty the transmission of congenital traits harmful to the body-social, preeminent among them, mental deficiency." The author also quotes the definition of mental deficiency postulated by the Royal College of Physicians of London, according to which the mentally deficient is "one who is able to earn his living under favorable circumstances, but unable, due to a mental defect, to compete on an equal footing with normal companions, nor manage himself or his business within the limits of ordinary prudence." He describes the brain of the mentally deficient as arrested in its development, this arrest occurring at any age. For him, "mental deficiency is an effect leading to the existence of wide numbers of the poor, lazy, fops, drunkards, prostitutes, and criminals." He argues that these are increasing in number, since imbeciles are not distinguishable from normals in appearance and mental deficiency does not detract from their fertility. Some mental defectives, he adds, learn reading, writing, or a trade, but always in a incomplete way. While some border on idiocy, others approach normality and may easily pass as normal, to the extent that only a scientific examination will expose them. "This," he adds, "is the most dangerous kind, for it may pass unnoticed and its reproduction follows the law that everthing in Nature engenders its kind."

1936 saw the publication by the Puerto Rico School Review of Reactions of Puerto Rican Children in New York City to Psychological Tests by Pedro A. Cebollero, at the time Assistant Commissioner of Education for Puerto Rico. This article is an attempted refutation of a study of Puerto Rican children in New York, conducted by the New York State Chamber of Commerce, which found 47 percent of the children retarded. Cebollero argues that the sample of 240 was too small for such a conclusion and was not representative, since it contained 76 percent Negroes and over 50 percent from families on relief, both groups which, the author further argues, are inferior on standard intelligence tests. He also cites Paul Monroe's A Survey of the Public Educational System of Puerto Rico to the effect that "the results of the Commission's measurements furnished convincing evidence that Puerto Rican children have sufficent mental ability to take on the kind of education which the modern world is developing."

In 1948, the Puerto Rican Department of Labor published a Censo de Ciegos, Mudos, Sordos y Psicóticos en Puerto Rico, in which retardates were lumped under the classification of psychotics.

The December 1956 issue of Pedagogía published an article by Dr. Juan A Rosellõ entitled El Síndrome Cerebral Crónico en los Niños de Puerto Rico, consisting of a study of cases refered to the

Department of Health's Mental Hygiene Clinic, from 1950 to 1956, and those referred to the School of Medicine's Clinic of Pediatric Psychiatry from 1956 to 1958. It reports that, in most of the cases showing behavior defects or symptoms of neurosis or psychosis, the difficulty could be traced to cerebral organic injuries. Roselló points out that "when the child's brain is affected by any condition, be it congenital or traumatic, physiological alterations, cerebral infections or nutritional distrubances, it reacts, according to its capacity, to express the affecting pathology." He describes four areas of change: (1) the sphere of individual behavior and social adjustment; (2) degree of severity of impairment in his intellectual capacity; (3) tendency to suffer convulsions; and (4) neurological changes, in the most severe cases. He then goes on to emphasize that "pathological cerebral processes which may fail to cause paralysis or other gross changes affect the brain to such an extent that they impair its higher functions, such as the individual's social adjustment."

One of the chapters of Un Programa de Salud Mental Para Puerto Rico (A Mental Health Program for Puerto Rico), issued in 1958 by the American Psychiatric Association, deals with the problem of mental retardation. The report points to a considerable lag in the field of mental retardation on the Island and the high degree to which our society ignores the problem of mental deficiency. "Such despondency," it says, "inflicts untold harm upon the mentally defective person, his family, and, often, the community itself. Care dispensed is mostly for custody rather than for rehabilitation." The report recommends that the problem be tackled through a comprehensive community-centered and family-oriented program. It advises that the community face the problem without the attempt to deliver this responsibility entirely into the hands of the government. It suggests that, in each community, some sort of chapter be established similar to those of the mainland's National Association for Retarded Children. According to the report, "local schools and agencies should keep abreast of information and fully employ their resources in helping the mentally defective and his relatives." It also recommends that a model communal center be instituted, with the possibility of integrating it with other health and welfare services to supply diagnostic treatment, orientation, and case study, together with community education. It further suggest that schools should be provided with psychological services and calls for special legislation in the field of mental retardation.

Reacciones de los Progenitores ante lo que Implica un Hijo Mentalmente Deficiente (Parental Reactions Towards Their Mentally Retarded Child), a Master's thesis submitted by María Cristina Cucurella to the School of Social Work of the University of Puerto

Rico, is based on interviews of parents and relatives of twenty-nine children diagnosed mentally deficient by the Department of Health's Mental Hygiene Clinic in 1955 and 1956. The author concludes that the lack of proper orientation and understanding of the problem brought diverse parental reactions, with anxiety and suffering as the predominant ones.

Implicaciones Sociales de la Deficiencia Mental (Social Implications of Mental Deficiency), presented by Dr. Trina Rivera de Río at the Fourth Convention of the Puerto Rican Psychological Association, points out the considerable lag in the field of mental retardation and the need for more attention to the problem. The report highlights the need to take into account the personality of the retardate.

What academic Achievement Can be Expected of Educable Subnormal Children? by Dr. Roberto Morán, appearing in Pedagogía, December 1960, presents the findings of a study of three hundred subnormal adolescents in England. Dr. Morán warns that a rise in the incidence of mentally subnormal children in Puerto Rico may be expected as a result of heightened educational norms, the use of more refined psychometric instruments, and advances in preventive medicine which will increase the probabilities of survival for brain injured children.

The Mentally Retarded Adolescent in a Rapidly Industrializing Area by María Elisa Gómez de Tolosa, 1961, describes the problem of mental retardation as growing in complexity with the transformation of the society from the agrarian to the urban.

SERVICES

It is only during the last decade that efforts to provide services for mental retardates in Puerto Rico began. The initial work was undertaken by organizations such as the Association for Mentally Retarded Children, the Association of Parents of Mentally Retarded Children (now extinct), the Association For Mentally Abnormal Children and the Instituto Psicopedagógico, and such invididuals as Sra. María Elisa Gómez de Tolosa, Don Modesto Gotay, and Doña Cándida Campos de Córdova.

As late as the 1940's there were no available services for the retarded in Puerto Rico. Retarded children of wealthy families were sent to the United States for care, where they had to cope with the additional barriers of language difficulties and cultural differences.

In 1947 the Public Welfare Division opened its Oficina de Impedidos (Office for Services to the Handicapped), a social welfare agency ministering exclusively to destitute families. Their services include the administration of psychometric tests. The high incidence of mental retardation that appeared in the test results led the office to organize a series of short courses for parents of mentally retarded children. This program is still in existence. Based on these courses, the Asociación de Padres de Niños Retardados (Association of Parents of Mentally Retarded Children) was formed in 1947.

The Association sponsored the creation of the Instituto Psicopedagógico de Puerto Rico (Psychopedagogical Institute of Puerto Rico) in 1949. Starting with three children in a rented wooden house, the Instituto now has its own grounds and buildings, staffed by some twenty professionals, and serving forty children. Administration of the Instituto is entrusted to nine members of the religious order, Congregación de Hermanas Hospitalarias de Jesús Nazareno. The Instituto is supported by monthly charges from private cases, an annual subsidy from the Legislature of Puerto Rico, and donations.

The aim of the Instituto is to work for the maximal development of the limited potentialities of the retarded, using specialized educational and training methods. It tries to train the retarded so that he may return home with the ability to adjust. Its most serious limitations stem from the necessity to admit cases at very different levels of retardation, which makes for difficulties in servicing.

At present, the Instituto keeps a practice center in social work for four University of Puerto Rico students and provides its personnel with systematic training, consisting of a one year child-care training program with meetings twice a week.

The Asociación Pro-Niños Retardados de Puerto Rico (Association for Mentally Retarded Children) was organized in 1957 by a group of parents seeking services for their retarded children, but it also now includes other citizens interested in the problem. It began with the premise that parents have the special responsibility to initiate and sustain efforts at organizing citizen help in ministering to the material and emotional needs of the retardate. Based on that principle, the association has, in recent years, developed the most intensive effort to date in informing the public about retardation. Its efforts include publication of informational pamphlets, lectures, newspaper articles, radio and television programs, fund raising drives, and the yearly Week of the Retarded Child, during which all these activities are intensified. It has opened a Parents' Guidance Center serving an average of one hundred families a year, to give parents orientation in understanding and accepting their retarded child. It helps in planning for the child's future, strengthening family relations, and stimulating parents' initiative in the search for the necessary services.

The association also instituted the Center For Trainable Children, a demonstration project located in a public housing development. Trainable retarded children are given experience in work, recreation, health habits, and social skills.

The Association for Mentally Abnormal Children runs a Center in Trujillo Alto for 20 severly retarded trainable boys, from 8 to 14. Clients receive free clothing, food, medicines, and medical and social services. The Center also provides inservice training for personnel and orientation for parents and relatives. It recently opened a practice center for the School of Social Work of the University of Puerto Rico.

There are two private schools which also report having special curricula for small groups of trainable mental retardates, but we lack data on their operations.

The Division of Public Welfare of the Commonwealth's Department of Health provides the mental retardate with direct services through the office for Service to the Handicapped, the Bureau of the Handicapped, and the Bureau of Institutions. It also offers the retardate indirect services through the Bureau of Family Welfare. The Office for Service to the Handicapped administers psychometric and projective tests to cases referred by other units of the Division. It also administers the funds provided for neurological tests and electroencephalograms. It participates in decisions regarding cases handled by the Psychopedagogical Institute and other governmental institutions. It occasionally aids in the orientation of parents and the community, and trains personnel working in public welfare institutions. Finally, it prepares informational materials on the available services and other aspects of mental retardation.

The Negociado de Bienestar del Niño (Bureau of Child Welfare) provides individual and group orientation for parents and trustees of the retardate, advises private organizations and institutions which have programs for the retardate, and studies the social conditions of cases that the Public Welfare Division wants to place in private institutions. It buys services from the Instituto Psicopedagógico and provides social services for the cases it has placed in the Insituto. The Bureau has recently opened a day-care center with facilities for thirty mental retardates, both male and female, ages four to eleven.

Through its Bureau of Institutions, the Public Welfare Division runs eleven institutions, nine of which serve the blind and minors having behavior and personality problems. Data published recently show that these institutions handle a daytime group of 1,300 children, about 60 per cent of which are mentally retarded. According to psychometric tests, their IQ's range from 20 to 85.

The División de Salud de la Madre y el Niño y Niños Lisiados (Division of Maternal and Child Health and Handicapped Children) operates a Diagnosis and Guidance Center for Retarded Children which handles children newly born up to six years of age. It was established in March 1961 in coordination with the Association For Retarded Children to provide study and early treatment of retardates.

In the short time it has been in existence, and with limited resources, the Center has not yet been able to achieve its objective. Its aims include promoting the normal and healthy development of the retarded child's personality and maximal development of his physical, mental, social, and emotional capacities; fostering and maintaining relations with community agencies and other groups in order to integrate the necessary services; and serving as a demonstration center for students and professionals.

The Center originated through the need to cope with the many cases of mental retardation found by the clinics and agencies of the Department of Health. It was also prompted by the findings made in a study of the physical and socio-economic characteristics of 599 seemingly retarded children. The Center attempts to find ways to improve the children's emotional life, once their problems are understood by their parents. It holds meetings of parents to conduct group therapy. It also prepares the necessary treatment plans to develop the child's skills and improve intra-family relations.

The Center has been sponsoring day-care centers run by the Division of Public Welfare, one having already been established on an experimental basis. The promising results already obtained has given hope for the establishment of others. The first day-care center served children who had gone through the Diagnosis Center. Even when mothers have been trained to handle their children, the Centers are needed to help the child in his relations with other children and to have the mother see how the proper care and training techniques work. This undoubtedly helps assuage tensions on the part of the mothers.

Many of those who come to the Center to solicit service are cases of severe retardation, classified as "trainable;" only a few of them are considered "educable."

Present practice aims at admitting for service solicitants with a higher level of intelligence who might be likely candidates to join the special groups organized by the Department of Public Education. Thus they would be able to join the special groups program directly upon leaving the Center. Since that would contravene the Department's norm that the program admit only children who have had difficulty with regular classes, it is the opinion of the Center that when a child is evaluated as an educable mental retardate, it would be an error to put him through the trauma of competing with normal children. The Center holds, similarly, that this problem may be partially solved through the organization of kindergartens and pre-kindergartens through the Department of Education.

Among the problems faced, the Center mentions lack of interagency coordination, physical limitations, and high turnover in personnel due to salaries which are not commensurate with the workload.

The State psychiatric hospitals currently handle cases of mental retardation, most of which show obvious signs of emotional and behavioral disorders. The Ponce Psychiatric Hospital, for instance, started handling mental retardates in 1962. Starting with one hundred cases, it now handles some five hundred a year, offering diagnosis, treatment, and advice to parents. Since it also reports that services are hampered by personnel shortages, it is now seeking funds to set up a Mental Retardation Clinic. The low salaries offered are the main factors which inhibit recruitment.

The Río Piedras Psychiatric Hospital and the Department of Psychiatry of the University of Puerto Rico have undertaken a Children's Clinic. La Esperanza, a special school that is part of that clinic, has enrolled forty-one children, divided into five groups on the basis of sex and age, pseudo-retardation, and difficulties in training. They are under the care of three teachers assigned by the Department of Education. The Clinic offers services in the areas of diagnosis and evaluation, advice to parents, psychotherapy, hospitalization in extreme cases, pharmacological treatment, prevocational guidance, and referral of children who, reaching the age of sixteen, may be assigned to vocational rehabilitation programs. It also provides evaluation and treatment to patients assigned to detention homes or other public welfare agencies, whose diagnoses indicate secondary mental deficiency or problems of behavior resulting from brain injury. The Clinic also provides evaluation and treatment for cases handled by the Tribunal Tütelar de Menores (Juvenile Court) and the Divisiôn de Ayuda Juvenil de la Policía (Police Department's Division of Aid to Minors). Finally, the Clinic trains internes in psychiatry and pediatrics, and general medicine, and students of medicine, social work, psychology, and nursing.

The mental Retardation Program of Puerto Rico, under the Health Department, started in July, 1964. The Program aims "to study the means to plan a steady and comprehensive service program for retardates and to conduct work in research and prevention of this condition," considering that "this is a problem which can be lessened in Puerto Rico if its causes be discovered and the necessary services established."

The Program is, in its present form, committed to a plan to coordinate services in mental retardation, to which end it has organized committees in each of the relevant areas: Public Welfare, Prevention and Health, Rehabilitation and Work, Education, and Legislation. It has an Inter-agency Executive Committee to regulate its work, which is mainly composed of the Directors of the agencies connected with the problem.

The Department of Education has been developing a service program for mental retardates, mainly through its Special Education Groups for Children with Learning Difficulties and the Vocational Rehabilitation Division. The Special Groups program currently handles about 1,200 children, subdivided into 68 groups, each of which has eighteen children. This is assumed to cover about 6 percent of all educable retardates, as estimated by the Department of Education for children from ages six to eighteen, in the 1964-65 school year.

This Program started in 1958 with an experimental group of eighteen children as a result of a study which was conducted by the Division of Maternal and Child Health and Handicapped children of the Department of Health in collaboration with the Department of Education. The Program started from scratch, with no reference to past experiences in the field, "not even with reference to similar programs conducted in the United States." The decision was made to work it out on the basis of their own experience. The pilot project teacher had no special training in the field of mental retardation. It is now considered necessary, however, that teachers in the program be required to have some minimal base of reference on how to work with these children.

The Program's curriculum is based on units of experience which aim at integrating classroom work with the child's life experience. One of its main problems is the lack of physical facilities. In an interview with the Director, she stated that lack of classrooms and adequate teaching staff was making it most difficult to meet the demands of the Program, due to the fact that the Program has no budget of its own, drawing its funds from the budget provided for the primary schools, and depending on priorities set by that budget.

The University of Puerto Rico is now planning to provide training for teachers of mental retardates. People in the Special Groups Program hope that a State Program for Mental Retardates will be instituted, and expect it will serve not only to broaden the existing facilities in the field, but also alter the prevalent mood in those State and private organizations which still see mental retardation as a problem of health, rather than of education.

The Division of Vocational Rehabilitation of the Department of Public Education has established vocational training units for retardate adolescents, in two towns, thereby broadening the limited services available in that area. These two units serve adolescents who have gone through the Department's Special Groups Program. The first of these units was initiated on an experimental basis, in May of 1961 in Bayamón, with twenty-three boys and girls. Based on this experience, another unit was established in Mayaguez, and others are planned for San Juan, Arecibo, and Humacao.

The Division has also started to accept youngsters for on-the-job training in mechanical work, woodwork, and auto service stations, as well as for study at trade schools for barbering, sewing, and cosmetology. Where the youngster enters on-the-job training, the employer is reimbursed for the trainee's salary by the Division of Vocational Rehabilitation. The adolescent retardate, by being placed in a job situation, gains a broader and richer conceptual framework, a wider worldview, all of which brings him out of the isolation in which he is living. Such enrichment of interpersonal relations aids in the rehabilitation process. It further serves to teach the retardate good work habits and instills a sense of responsibility. The retardate is not told that the Division pays his salary. This leaves the employer free to demand productivity and responsibility from the retardate, and to treat him as he would his other employees. Employers' reactions to this program has been very favorable.

As part of its regular program, the Division has rehabilitated some fifty-three cases of mental retardation since 1961. The generally positive results of these services have led to its adoption by other District Offices of the Division.

Despite serious efforts to improve work in the field of mental retardation, available services are far from sufficient and is subject to a host of problems, including a lack of coordination among the various agencies handling retardation.

Legislation

In 1952, the Legislature of Puerto Rico passed a bill providing scholarships for mentally retarded children. This law declares:

> "There are in Puerto Rico numerous mentally retarded children, due to their having suffered infantile paralysis, meningitis, or other diseases affecting the nervous and cerebral system, or due to congenital defects, who cannot be given help in the Commonwealth of Puerto Rico owing to the lack of Centers where they can be examined and treated, and the State Government must aim at remedying the situation of these adolescents, to whatever possible extent.
>
> "Although the State could not once and for all handle the problem and give it an adequate solution, it may breach it partially, and continuously, by instituting scholarships for the care of children afflicted by mental retardation, sending them to schools and clinics in the United States, adequately equipped to study and help them."

Even though the American Psychiatric Association recommended in its 1958 report to the Legislature that laws be enacted to protect and guarantee the rights of mentally retarded persons, the standing law on the subject, the Mental Hygiene Act, as ammended on June 1962, makes no mention of the problems raised by mental retardates. Its aim is to regulate the admission of patients to hospitals and other institutions for mental patients, to affix judicial procedure in its sanity cases, to regulate the release and admission of patients in the Psychiatric Hospital, to protect the rights of mental patients, and to provide for the transfer of property.

A report made by the M.R.P.'s subcommittee on the legal aspects of retardation points out that there is no fixed legal definition for the condition. Mental retardation is variously labeled insanity, lacking in the proper exercise of reason, madness, idiocy, or generally included under incapacities or impairments. The Committee made a compilation of legislation bearing on mental retardation. Retardation has a restrictive effect on the person's legal capacity. It inhibits the legal capacity to contract marriage, and marriages so contracted may be declared null and void, although the children of such marriages are legitimate. Current law in Puerto Rico stipulates that persons falling in the categories in which retardates are usually placed are unable to govern themselves and therefore are subject to guardianship, although, for adult retardates, a ruling must be made establishing their condition.

The Commission entrusted with the revision of the Penal Code has dealt with the problem of safeguarding the retarded's civil rights, and the revised edition of the code should incorporate the Commission's suggested solution to the problem. The subcommittee recommends that the Civil Code define mental retardation and make specific distinctions according to the socio-intellectual level of functioning of the various types of mental retardates.

Bio-medical Aspects

The following research projects are now underway in Puerto Rico:

Drs. Dolores Méndez-Cashion of the Department of Pediatrics and Luis P. Sánchez-Longo of the Section of Neurology of the University of Puerto Rico School of Medicine, (with various collaborators, including Dr. M. Paul Weinbren of the Virus Laboratory of the Puerto Rico Nuclear Center) on Obscure Acute Neurological Syndromes in Children. Children admitted to the general pediatric wards of the University Hospital who present acute neurological symptoms for which no explanation is clinically apparent are the subject of investigations including viral studies. They are followed up by neurological examination and psychological testing in an attempt to evaluate the sequelae and determine what factors alter the prognosis.

Dr. Margarita Cáceres-Costas of the Department of Pediatrics of the University of Puerto Rico School of Medicine, in cooperation with Dr. Carolyn C. Huntley of the Bowman Gray School of Medicine is studying clinically and serologically a group of children with the visceral larva migrans syndrome (a systemic parasitic infestation) who present a high incidence of convulsions, and who will be the subject of eletroencephalographic study with Dr. Luis P. Sánchez-Longo and Dr. Dolores Méndez-Cashion.

Dr. Arnaldo Roldán, of the Department of Preventive Medicine of the U.P.R. School of Medicine, is presently conducting an epidemiologic study of lead poisoning on the families and associates of children hospitalized at the University Hospital under the clinical observation of Dr. Margarita Cáceres-Costas, with the collaboration of Dr. Sidney Kaye of the Institute of Forensic Medicine of the Department of Pathology.

Dr. José Sifontes, of the Department of Pediatrics of the University of Puerto Rico School of Medicine in cooperation with the U.S.P.H.S. Tuberculosis Research Office is investigating the prevention of tuberculous meningitis, using isoniazid as a chemoprophylactic agent. The sequelae of patients who suffered from tuberculous meningitis and recovered are being studied at the Pediatric Chest Clinic. Underway is a study of the effect upon the fetus of ingestion of isoniazid by the mother during pregnancy.

Dr. Stanley Asencio, of the Department of Obstetrics and Gynecology of the University of Puerto Rico School of Medicine has a study underway of anemic parturients. It is projected to broaden the study to include evaluation and follow up of the babies by Dr. Helen Rodríguez de Curet of the Department of Pediatrics.

Drs. Juan J. Figueroa-Longo and Helen Rodríguez de Curet plan the long term follow-up of hyperbilirubinemic babies in correlation with cord values for bilirubin and hemoglobin and the spectrophotometric readings of the amniotic fluid of the sensitized mother.

Work in progress in the Laboratory of Perinatal Physiology NINDB, U. S. Public Health Service and the U.P.R. School of Medicine includes:

a. Production of In Utero Brain Damage by Compression of Umbilical Cord. R. E. Myers and W. Niemann.

b. Patterns of Neuropathological Change in In Utero and Perinatal Asphyxia. R. E. Myers.

c. Vascular Factors in Neonatal Brain Damage. R. E. Myers.

d. Alterations in Preferential Use of Metabolic Pathways of Brain Tissue During Asphyxiation. Ransil and Myers.

e. PH changes in brain tissue during anoxia. Ransil and Myers.

f. Etiological Factors in Brain Swelling of the Newborn and Adult Monkey. Myers and Ransil.

g. A Spontaneously Occurring Case of Incomplete Abruption Placentae in the Monkey Producing Severe Brain Damage. Myers and Niemann.

h. Experimental Allergic Encephalitis in the Newborn Monkey Producing Multiple Sclerosis-like State. Lenner, Stone, Myers, Niemann.

i. Effects of Hypervitaminosis D on the Nervous System of the Newborn Monkeys. Cooke and Myers.

j. Effects of Hyperbaric Oxygen Administration During Pregnancy in the Monkey. Fuyikura and Myers.

k. Anatomical Findings in a Case of Spontaneously Occurring Anencephalus in the Monkey. Niemann and Myers.

l. Experimental Myoclunus in the Newborn Monkey and Its Electrophysiological Manfiestations. Schobey and Myers.

m. The Effects of Barbiturate Premedication on the Gasp Time, Survival Rate, and Brain Pathology in the Newborn Monkey. Dawes, James and Myers.

n. Experimental Production of Kernicterus in the Newborn Monkey with a Combination of Anoxia and Hyperbilirubinemia. Lucey and Myers.

o. Electrocardiagraphic Findings During Anoxia In Utero in the Monkey. Figueroa Longo and Myers.

p. Comparison of Effects of Specific Brain Lesions Produced in the Newborn Compared to the Adult Monkey. R. E. Myers.

q. Perceptual Effects of Early Brain Damage in Monkeys. R. E. Myers.

The Results of The Raven Progressive Matrices Test

We administered the Raven Progressive Matrices to a subsample of those persons who received the Stanford-Binet Tests, selecting randomly a [illegible]5% subsample. Our results are based on 215 persons. As it happened, despite all our precautions, the subsample contained an even higher percentage of retardates than the sample from which it was drawn. If we had based our estimates of the extent of retardation solely on the Stanford-Binet scores of these 215 persons, we should have ended up with a figure of 43.8 percent retarded rather than the 31.2 percent figure we arrived at using the full sample.

Most of the Raven scores were, as might be expected, extremely low. Since the selection procedures deliberately oversampled retardates, we cannot use the figures directly to map the distribution of scores on the Island. Some idea, however, of the distribution of scores can be obtained, if we stratify by I.Q. scores as obtained from the Stanford-Binet Tests. The following table suggests the relationship:

Table B-1

Mean Raven Score
By IQ and Age

	AGE											
	23 - 27		28 - 32		33 - 37		38 - 42		43 - 47		48 - 49	
IQ°	M*	N**	M	N	M	N	M	N	M	N	M	N
Under 41	12	2	13	2	13	4	9	3	11	3	7	1
41 - 50	14	11	14	7	14	12	12	12	13	5	15	1
51 - 60	17	5	14	9	15	17	15	11	15	13	11	2
61 - 70	20	9	18	12	16	11	15	7	17	5	11	4
71 - 85	27	5	29	1	30	1	16	4	14	2	24	2
over 85	30	5	39	5	34	9	35	5	37	5	24	3

*M = mean Raven score
**N = number of persons
°IQ = is based on Stanford-Binet results

The relationship between IQ's as measured by Stanford-Binet and by raw Raven scores is readily apparent. There is some tendency for Raven scores to drop with age, but this seems to be in the order of magnitude of five points. This drop is considerably less than the drop reported by Raven. For persons on the IQ level of most of our subjects Raven reports a drop of about sixteen points. (See Table B-2) This discrepancy between our results and Raven's presents certain complications in the use of a cutoff point between normality and retardation.

THE CUTOFF POINT

Our first attempt to select a cutoff point was based on the only table reported by Raven for adults.

Table B-2

TABLE V. - THE SELF-ADMINISTERED or GROUP TEST (ADULTS)

Working percentile points calculated from the natural scores of 3,665 Militiamen and 2,192 Civilians

Percentile Points	20	25	30	35	40	45	50	55	60	65
95	55	55	54	53	52	50	48	46	44	42
90	54	54	53	51	49	47	45	43	41	39
75	49	49	47	45	43	41	39	37	35	33
50	44	44	42	40	38	35	33	30	27	24
25	37	37	34	30	27	24	21	18	15	13
10	28	28	25	-	-	-	-	-	-	-
5	23	23	19	-	-	-	-	-	-	-

Note: Too few dull people over 30 have, as yet, been tested for the 5th and 10th percentile points to be accurately determined.

(Reproduced from Progressive Matrices: A Perceptual Test of Intelligence, 1938; J. C. Raven; H. K. Lewis & Co. Ltd.)

Based on this table we selected the following as cutoff scores:

Table B-3

Cutoff Scores by Age

Age	Cutoff Score
23 - 27	25
28 - 32	22
33 - 37	18
38 - 42	15
43 - 47	11
48 - 49	8

These are extrapolations, being an estimate of a cutoff score which would leave five percent of Raven's sample retarded. Our attempt to use this cutoff score to estimate retardation on our sample proved highly unsatisfactory. The proportion of people passing the test rose rapidly with increasing age, as the following table suggests:

Table B-4

Proportion Passing Raven by Age

Age	Proportion Passing Raven
23 - 27	24 %
28 - 32	25
33 - 37	24
38 - 42	40
43 - 47	79
48 - 49	92

Since there is nothing to indicate that the members of our sample became progressively smarter with age, we concluded that the results were an artifact of the use of a cutoff score based on Raven's results. Several factors might account for our paradoxical results. The population upon which Raven standardized his test contained a high proportion of militiamen; it may be that those who chose to remain in the militia until an advanced age are not conspicuous for their intelligence. It may also be that Raven's results are appropriate in England where people may get progressively lower IQ scores with advancing age as they lose the benefits of their early education, until an English sample of people in their late 40's may have fallen to the point of being comparable with a Puerto Rican sample of the same age.

In any event, the discrepancy seems to be a function of the different methods of scoring the Raven and the Stanford-Binet. The norms for the Stanford-Binet evaluate all persons sixteen years and older on the same basis. If we are to compare the effects of verbal and non-verbal tests, we can do so only by using comparable cutoff points. On the basis of this logic, we recalculated the Raven scores, using a score of nineteen or less as indicating retardation. This is based on an estimate of a two percent rate of retardation in England for persons twenty or twenty-five years old. It seems to us to correspond to a score of seventy on the Stanford-Binet.

Table B-5

Stanford-Binet Scores by Raven Scores

	Stanford-Binet Scores			
	70 or Less		Over 70	
Raven Scores	Number	Proportion	Number	Proportion
Over 19	20	12 %	37	79 %
19 or less	148	88	10	21
TOTAL	168	100 %	47	100 %

Using this cutoff point, our results showed marked agreement with Stanford-Binet scores. Seventy-nine (79) percent of the persons who passed the Stanford-Binet passed the Raven. Eighty-eight (88) percent of the persons who failed the Stanford-Binet failed the Raven. If we had used the Raven as our criteria for determining the proportion of retarded, we would probably have arrived at a slightly higher figure than the one actually used. Our high rate of retardation, therefore, does not seem to be a function of our use of a verbal test in measuring IQ.

APPENDIX C

Demographic Distribution of the Sample

Table C-1

SEX

Sex	Number	Proportion
Male	2110	44.2%
Female	2661	55.8
TOTAL	4771	100.0

Table C-2

Marital Status

Status	Number	Proportion
Single	663	13.9%
Married	3469	72.7
Consensual Union	324	6.8
Divorced	138	2.9
Widowed	67	1.4
Separated	110	2.3

Table C-3

AGE

Age	Number	Proportion
23 - 27	1050	22.0%
28 - 32	940	19.7
33 - 37	949	19.9
38 - 42	983	20.6
43 - 47	849	17.8

Table C-4

Education

Education	Number	Proportion
None	320	6.7%
1- 4 years	1169	24.5
5- 8 years	1159	24.3
9-12 years	1541	32.3
13-16 years	496	10.4
More than 16 years	86	1.8

Table C-5

Age at Leaving School

Age at Leaving	Number	Proportion
Never Went to School	320	6.7%
10 years or less	510	10.7
11 - 15 years	1617	33.9
16 - 20 years	1427	29.9
21 - 25 years	396	8.3
Over 25 years	196	4.1
No Answer	305	6.4

Table C-6

Technical or Vocational Training

Training	Number	Proportion
Received Training	324	6.8%
Did not Receive Training	4447	93.2

APPENDIX - D

Commonwealth of Puerto Rico
Department of Public Education
Board of Vocational Instruction
Division of Vocational Rehabilitation
Hato Rey, Puerto Rico

PRM-1

____
Number

Family Number: ____________

Interview number: ____

Name of interviewee: ______________________________________
Name Paternal Surname Maternal Surname

Nickname: ____

Address: ____
No. Street Housing Project or Urb.

____
"Barrio" Municipality

Write here any additional information which may help to locate the subject:

____

____

____

____

____

Date of interview: ____

Finished: ____________
Time

Began: ____________
Time

Total: ____________
In minute

Name of interviewer: ______________________________________

FRM-1

FAMILY COMPOSITION

_______________ Number

1 Name	2 Sex	3 Age	4 Kin-ship	5 Civil Status	6 DLH	7 LOC	8 Educa-tion	9 Age left School	10 Reasons	11 Physical Mental Condition	12 Classifi-cation
Housewife 1.	F		EGO								
2.											
3.											
4.											
5.											
6.											
7.											
8.											
9.											

This chart consists of twelve columns. Information required in these columns will be obtained for all persons included in column one. Once the information is obtained, draw a circle around those whose ages are between 23 and 49 years. To define the exact kinship relation with the housewife, you can use only the following terms: Husband (H), Wife (W), Son (Sn), Daughter (D), Father (F), Mother (M), Brother (B), Sister (Sr), Friend (Fr), if it's the case of an "hijo de crianza" or an adopted son, write letter "R" besides note (Sn). Example: If John Doe is the son of housewife's sister the entry should be (SnSr); meaning son (Sn) of Ego's (housewife) sister (Sr).

Column 12: If, based on the information about education and occupation, the S is not deficient, write letter N in the proper space. If S could possibly be deficient, write the letter D.

OCCUPATIONAL EXPERIENCE

Number ________

	1958		1959		1960		1961		1962		1963		1964
	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(1)													
	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(2)													

	1958		1959		1960		1961		1962		1963		1964
	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(3)													
	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(4)													
	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JAMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(5)													
	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(6)													

Key: 1) Occupation 2) Salaries or wages 3) Own business 4) Farm 5) Other income 6) No remunerative employment

PRM-1

OCCUPATIONAL EXPERIENCE

Number ______

1958		1959		1960		1961		1962		1963		1964
JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(1)												
JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(2)												
1958		1959		1960		1961		1962		1963		1964
JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(3)												
JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(4)												
JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JAMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(5)												
JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAMJ	JASOND	JFMAM
(6)												

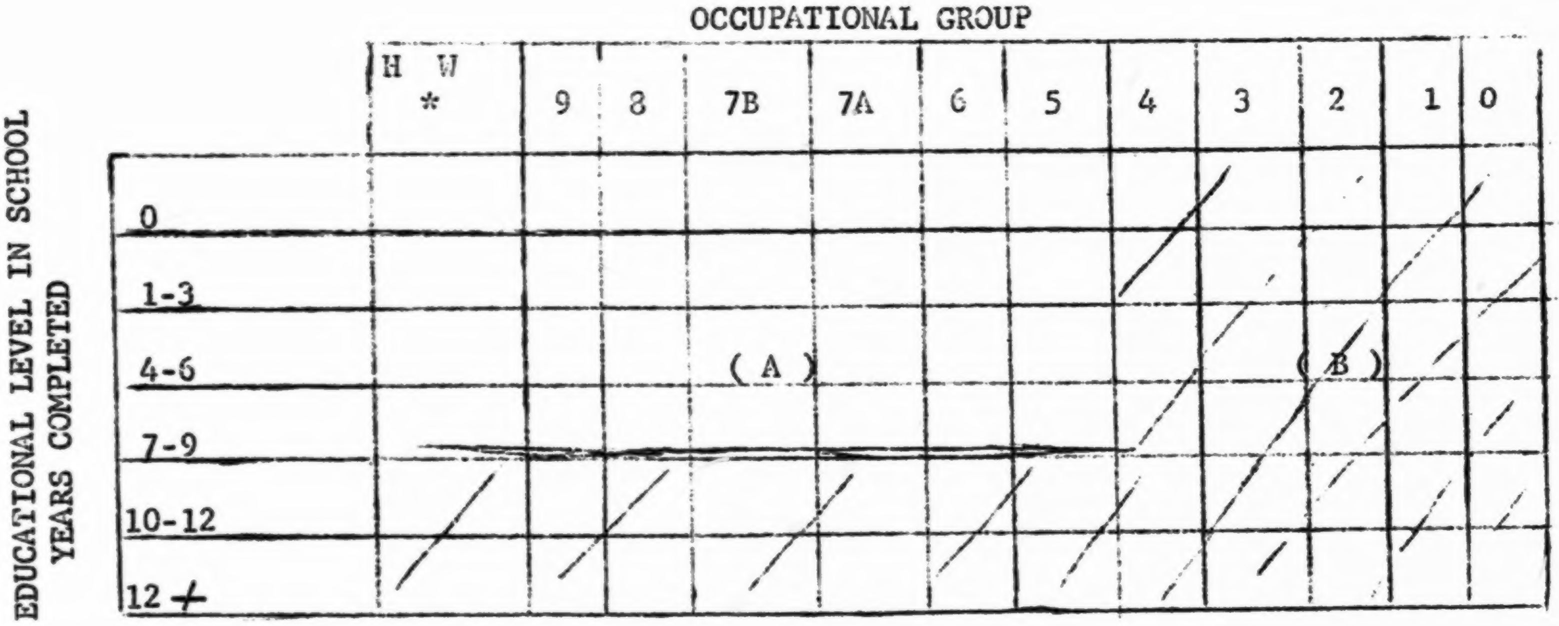
Key: 1) Occupation 2) Salaries or wages 3) Own business 4) Farm 5) Other income 6) No remunerative employment

____
Number

Name: ______________________________

Address: ______________________________

____

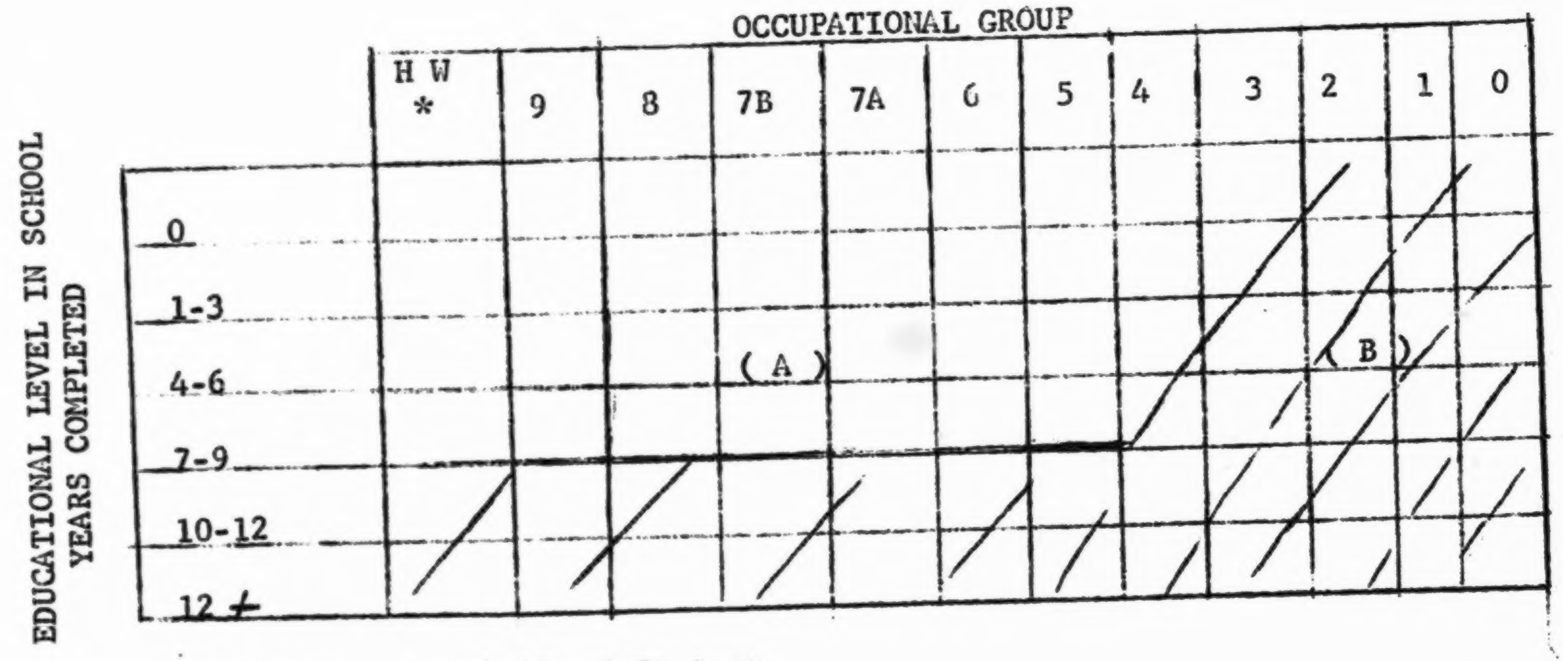

OCCUPATIONAL GROUP
H W *
9
8
7B
7A
6
5
4
3
2
1
0
EDUCATIONAL LEVEL IN SCHOOL YEARS COMPLETED
0
1-3
4-6
7-9
10-12
12 +
(A)
(B)

(A) Zone of probably deficient.
(B) Zone of normals.

Name: ______________________________

Address: ______________________________

____


OCCUPATIONAL GROUP
H W *
9
8
7B
7A
6
5
4
3
2
1
0
EDUCATIONAL LEVEL IN SCHOOL YEARS COMPLETED
0
1-3
4-6
7-9
10-12
12 +
(A)
(B)

(A) Zone of probably deficient
(B) Zone of normals.

______ Number

Do you know of any person in this community who:

a - suffers from his mental faculties;

b - is mentally retarded

c - is physically handicapped? /Yes / / No /

1) Who? Name: ______

2) Where does he live? Address: ______

______

3) Condition: /P / /R / /F /

Interviewer's observations:

______

______

______

______

______

______

______

______

______

______

______

______

______

APPENDIX - E

Commonwealth of Puerto Rico
DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL REHABILITATION
P. O. Box 1118
Hato Rey, Puerto Rico

PRM-2 CLASSIFICATION ________ ________ ________ ________
Comm. PRM-1 Research Asst. Number

EMPLOYED SUBJECTS
(Questionnaire for the employer or supervisor)

SUBJECT'S NAME ____________________

/ D / / N / OCCUPATION ____________________

NAME OF THE FIRM ____________________

TYPE OF BUSINESS ____________________

ADDRESS ____________________

NAME OF IMMEDIATE SUPERVISOR ____________________

DATE OF INTERVIEW ____________________

NAME OF INTERVIEWE ____________________

FINISHED ____________

BEGAN ____________

TOTAL TIME ____________

PRM-2

Number

1. How long has "X" been working here?

In months /1-3 / / 3-6 / / 6-12 /

In years / 1-2 / / 2-4 / / 4-6 / / + more than 6 /

2. How did "X" get this job?

______applied for it

______a friend or relative of yours asked you to employ him

______others (specify)______________________________

____

____

3. Could you describe exactly the work he is supposed to realize?

PROVE: ______________________________

____

____

4a. As you well know, Mr. John Doe, all persons are not alike, that is, there are differences between persons. For example, there are persons who are very tall, others who are not so tall and others who are short. In the same way there are persons who have plenty of money, others who have a regular amount of money and others who have a small amount of money. (EXPLAIN FURTHER IF NECESSARY). In this card, Mr. Doe, (AT THIS POINT, HAND THE INTERVIEWEE THE CARD WITH THE SCALE) you have a scale where you can classify your employees by the degree of efficiency that the worker possesses. In number I we have the worst employees, in number 5 we classify the best employees, the rest will fall between these two extremes. Regarding the quality of his work, on what point along this line, would "X" fall? (PAUSE) Would you say his work is of the best quality, worst quality, or where would he belong between these extremes? (PROCEED IN THE SAME WAY WITH THE REST).

1.	Quality of his work	5	4	3	2	1
2.	Knowledge of his work	5	4	3	2	1
3.	Care of material and equipment at work	5	4	3	2	1
4.	Accepts criticism	5	4	3	2	1
5.	Interpersonal relations	5	4	3	2	1
6.	Responsibility	5	4	3	2	1
7.	Absenteeism	5	4	3	2	1
8.	Punctuality	5	4	3	2	1
9.	Need of being supervised	5	4	3	2	1
10.	Organization work	5	4	3	2	1
11.	Self confidence	5	4	3	2	1
12.	Personal hygiene	5	4	3	2	1
13.	Use of safety measures at work	5	4	3	2	1
14.	Skill	5	4	3	2	1
15.	Perseverance in his work	5	4	3	2	1
16.	Capacity to follow instructions	5	4	3	2	1
17.	Capacity in getting along with his fellow workers	5	4	3	2	1

18. Capacity in getting along with people 5 4 3 2 1

19. Adaptability to innovations 5 4 3 2 1

20. Initiative 5 4 3 2 1

4 b. Well, Mr. Doe, we have seen different characteristics of "X", your employee. Now tell me, regarding his general efficiency in his work, where would you classify "X" in the scale?

Very good	Good	Fair	Poor	Bad
100%	75%	50%	25%	0%

5. What things would you say would make "X" a better employee?

6. Regarding his work, which would you consider are his best qualities?

7. Have you had any difficulties with "X"?

8. What other things could you tell me about "X" that would let me know him better as an employee? Actions, incidents, etc.

____

____

____

____

____

Interviewer's notes: ______________________________

____

____

____

____

____

____

Appendix "F"

Commonwealth of Puerto Rico
Department of Public Education
Board of Vocational Instruction
Division of Vocational Rehabilitation
Hato Rey, Puerto Rico

PRM-3 (Rev) ____________

Interview number: ______________________

Full name of interviewee: ______________________ **Sex** /F/ /M/

Nickname: ______________________

Address: ______________________
Street Number Urbanization or Housing Project

Date of interview: ______________________

Finished: ____________

Started: ____________

Total: ____________
In minutes

Name of interviewer: ______________________

____
Number

1. Where were you born? ________________________________
Suburb / Sub-area Municipality

2. (a) How many of your brothers and sisters are older than you? /_____/

(b) How many of your brothers and sisters are younger than you? /_____/

(c) ☐ Total number of brothers and sisters

(d) ☐ Subject's place in the family

NOTE: (WHEN YOU OBTAIN THE TOTAL NUMBER OF BROTHERS, CHECK IT WITH THE SUBJECT)

3. (a) Are you: /single/ /married/ /separated/ /divorced/ /widow/ ?

(b) IF NOT SINGLE: Is your marriage /by the church/ /by civil court/ /live together/ /used to live together/

(c) Is your husband (wife) living with you now? /YES/ /NO /

(d) IF NEGATIVE: Where is he (she) living and why? ____________________

____

____

____

____

(e) Have you been married before? /YES/ /NO/

(f) IF POSITIVE, ASK: How many times before? / 2 / / 3 / / 3+ /

(g) At what age did you marry for the first time?

____ less than 15	____20-24	____30-34	____45-49
____ 16-19	____25-29	- ___35-44	____doesn't apply

4. (a) How many children do you have?

___from this marriage	___of spouse by previous marriages
___from previous marriages (or outside marriage)	___ tep sons
___foster sons	___other: ____________________

NOTE: (WHENEVER POSSIBLE, THIS INFORMATION SHOULD BE OBTAINED FROM COLUMN 4, PAGE 2 OF PRM-1).

(b) Do all of them live with you now? / YES / / NO /

(c) IF NEGATIVE: With whom do they live?

____Friends _____ex-spouse

____Independently _____married and living with spouse

____Relatives: Specify: ____

(d) Why? ____

____

____

____

NOTE: (IF SUBJECT IS MARRIED AND YOU HAVE NOT OBTAINED HIS FAMILY COMPOSITION, PROCEED TO OBTAIN IT BY FILLING PAGE 2 OF PRM-1.)

5. (a) At the moment of your marriage, with whom were you living?

____with parents ____boarding (not with relatives)

____with relatives ____alone (independently)

____other (specify): ____________________

(b) When you married for the first time, did you set your own house?

/YES/ /NO/

(c) (If yes): Where?
a) ___ in the same neighborhood as your family?
b) ___ in the neighborhood of your mate's family?
c) ___ in another neighborhood, but in the same town
d) ___ in some other town

(d) How come? (What made you do it that way?) ________________________________

____

____

6. (a) Would you say that most (the majority of) married couples are happy?

/YES/ / NO /

____
Number

(b) What makes you think that way? ______________________________

____

____

7. If you were to marry for the first time, would you marry:

___ the same person you married

___ some other person

___ would not get married

NOTE: (THE PURPOSE OF THIS QUESTION IS TO FIND OUT THE SUBJECT'S FEELINGS TOWARD MARRIAGE. IF HE IS NOT ABLE TO UNDERSTAND THE QUESTION, REFORMULATE IT THIS WAY:

How old were you when you got married? Suppose you are that age now, would you marry the same person, some other person, or would not get married.)

(b) Why? ____

____

____

8. In which of the following were you helped,

a) by your relatives b) by your friends?

In which of the following have you helped?

a) your relatives b) your friends?

NOTE: ASK EACH ITEM SEPARATELY.

TABLE 8

R-----S	F------S	ACTIVITY	S-----R	S-----F
		Finding a job		
		Taking care of the children		
		Repairing the house		
		With money		
		Giving advice		
		Caring when sick		
		House hold chores		
		Other		

9. When something worries you, or you have a serious problem, with whom do you consult:

_____spouse ____mother ____friend-neighbor ____Priest

_____father ____other relatives ____friend (not neighbor) ____Minister

_____other (specify): ____________________________________

NOTE: (IF SUBJECT MENTIONS MORE THAN ONE PERSON, ASK WITH WHICH OF THESE HE PREFERS TO CONSULT HIS PROBLEMS. WRITE NUMBER 1 BESIDE THIS PERSON.)

____
Number

10. In all homes there's work which the persons living in the house share. Could you tell me who in your house, including all persons living in the house, takes care of:

TABLE 10

HOUSE CHORE	WHO?
Looking after the kids	
Buying the necessary goods	
Cooking meals	
Washing dishes	
Washing clothes	
Ironing	
Cleaning the house	
Throwing out the garbage	
Making repairs to the house	
Painting	
Other	

KEY: Ego; H (husband;) W (wife); D (daughter); S (son); Sis (sister;) B (brother); F father); M (mother); Fam (family)' If he has no kinship with Ego, specify who.

NOTE: USE KEY (F) WHEN THE ACTIVITY IS CARRIED OUT BY ANY MEMBER OF THE FAMILY.

____
number

11. What religion do you belong to?

___Catholic ___Adventist ___Other: ____________________

___Spiritualist ___Protestant: ____________________
Denomination

NOTE: (IF SUBJECT IS SPIRITUALIST, ASK QUESTION 12 IN ALL ITS PARTS. IF HE ISN'T, LIMIT YOURSELF TO THE FIRST PART OF THE QUESTION).

12. Do you go to church or meetings of a religious charcacter?

/YES/ /NO/

IF POSITIVE: a) How often do you go?

____Once a week or more ____Once or twice a year

____Once or twice a month _____Other: ________________

13. Who are your friends?

TABLE 13

FRIENDS (NAME)	SEX	AGE	WHAT DOES HE (SHE) DO?	WHERE DOES HE (SHE) LIVE?

14. a) What do you do during your free time, that is, when you are not working?

PROBE: WRITE DOWN ALL ACTIVITIES MENTIONED BY SUBJECT AND INDICATE THE DEGREE OF PARTICIPATION; (LITTLE, AVERAGE, FRECQUENT).

TABLE 14

ACTIVITY	L	A	F	FRIEND
1.				
2.				
3.				
4.				
6.				
7.				
8.				
9.				
10.				

NOTE: IF THE SUBJECT HASN'T MENTIONED ANY OF THE FOLLOWING, ASK IF HE PARTICIPATES AND HIS DEGREE OF PARTICIPATION.

conversing watching TV playing dominoes movie drinking listening the radio or a phonograph visiting sports attends sports events reading

NOTE: (Draw a circle at the left of the three (3) activities the subject prefers; use a plus sign (+) inside the circle of the activity he likes most and a minus sign (-) inside the circle of the one he likes least).

REFERRING TO TALBE 14 ASK WITH WHICH FRIENDS DOES HE FREQUENTLY PARTICIPATES IN THESE ACTIVITIES. WRITE THE NAME OF THE FRIEND ON THE APPROPRIATE LINE IN COLUMN 5, TABLE 14.

b) Have you felt lonely sometime? /YES/ / NO /

c) If affirmative, how frequently.

___most of the time ___sometimes ___not too often

d) What things would you like to do that you are not doing now?

____

____

____

NOTE: ACCEPT ANY INTERPRETATION THE SUBJECT MAKES OF THE QUESTION. OBTAIN AT LEAST THREE (3) ACTIVITIES.

e) What things do you like to do when you are alone?

15. a) Do you belong or have you belonged to any social organization?

/YES/ /NO/

(INCLUDE UNIONS, RECREATIVE ASSOCIATIONS, MILITARY ASSOCIATIONS, CIVIL DEFENSE, RELIGIOUS GROUPS, PARENT-TEACHERS ASSOCIATION, ETC.) (IF AFFIRMATIVE, FILL THE FOLLOWING TABLE).

TABLE 15

NAME	DATE OF ENROLLMENT	PARTICIPATION			POSITIONS HELD
		L	R	F	

b) Have you participated in neighborhood meetings to solve any problem of the community?

16. a) Where did you live since birth until six years of age?

Municipality Suburb /Sub Area 6 to 12

13 to 18

(IF HE LIVED IN MORE THAN ONE PLACE, OBTAIN THE PLACE IN WHICH HE LIVED THE MOST.)

b) When did you move to this place? ______________________________

17. a) Tell me Joh Doe, what are the things you admire most in a man (woman)?

(IF THE SUBJECT MENTIONS LESS THAN FIVE (5) ATTRIBUTES, KEEP ON ASKING UNTIL YOU OBTAIN AT LEAST FIVE).

NOTE: (ASK THE QUESTION FOR THE SAME SEX OF THE SUBJECT.)

ATTRIBUTES	PREFERENCE	POSSESSES

b) Which one of these important to you? (WRITE IN THE COLUMN "PREFERENCE" THE NUMBER (1) IN THE CORRESPONDING LINE. KEEP ON ASKING FOR THE 2ND, 3RD, 4TH...5TH.)

c) Which one of these do you possess? (IN THE COLUMN "POSSESSES" MAKE A CHECK MARK (✓) IN THE APPROPRIATE LINE. READ THE LIST TO THE SUBJECT IN THE SAME ORDER HE (SHE) MENTIONED THEM).

18. a) Of all the jobs you have had, which one would you say was the one you liked the most? ______________________________

b) What about this job made you like it most? ______________________________

____

19. a) Of all the jobs you have had, which would you say was the one you liked the least? ______________________________

____

b) What about this job made you like it least? ______________________________

____

20. About your present job, I would like to know:

a) How do you feel about it? /HAPPY/ /UNHAPPY/

b) What they pay you, is it reasonable? /YES/ /NO/

c) /Is it/ or/is it not/ enough to support your family?

Expalin: ____________________

____

____

d) What do you think about your job?

___very good ___not too good

___good ___not good at all

e) How did you get this job?

___Answered an advertisement ___Friend or Relative

___Through a Government Agency ___Other: ____________________

___Applied for it ____________________

f) Your boss or immediate supervisor, what kind of person is he?

(PROBE)

____

____

____

21. Did you go to school? /YES/ /NO/

a) Where? ____________________

Name

____

Town Urb. Rural

b) What was your highest grade? ____________________

c) Why that grade?
If never attend school ask: Why didn't you go to school?

Reasons: ______________________________

____

____

22. After leaving school, when did you get your first job? ______________

____

____

b) What was your first job? ______________________________

____

____

23. Are you satisfied with the schooling you have had? ☐ YES ☐ NO

Explain: ______________________________

____

____

24. Every person desires to get a special kind of job..Which kind of job would like to do? ______________________________

____

a) Do you think you can get it some day? ☐ YES ☐ NO

b) What would you need to get this job? ______________________________

____

____

25. Medical History: In general terms, would you say that your health has been ....

☐ VERY GOOD ☐ GOOD ☐ FAIR ☐ BAD

In case of fair or bad, ask: What illnesses have you had?

TABLE 25

ILLNESS	AGE	TREATMENT		CONSEQUENCES
		YES	NO	

NOTE TO THE INTERVIEWER: (WRITE ANY VISIBLE PHYSICAL DEFECT AND DESCRIBE IT. IF THE ILLNESS HAS PRODUCED ANY PHYSICAL LIMITATION, ASK IF AT ANY MOMENT HE HAS RECEIVED ANY HELP FROM VOCATIONAL REHABILITATION. WHEN?; AND WHAT WERE THE RESULTS).

26. IF THE SUBJECT LIVES WITH HIS PARENTS, MAKE ARRANGEMENTS TO TEST THEM. IF HE HAS BROTHERS AND SISTERS MAKE ARRANGEMENTS TO TEST THE PRECEEDING ELDEST AND THE NEAREST YOUNGER.

    IF HE IS MARRIED, GIVE THE TEST TO SPOUSE. IF HE HAS CHILDREN, GIVE THE TEST TO THE OLDEST AND YOUNGEST CHILD. DO NOT GIVE TESTS TO CHILDREN UNDER FOUR (4) YEARS OF AGE.

COMPLETE THE FOLLOWING TABLE

TABLE 26

SUBJECT	IQ	CLASSIFICATION	EDUCATION	SCHOOL AGE	OCCUPATION

COMMMENTS:

Appendix G

Community Types in Puerto Rico

Puerto Rico is a small and relatively homogeneous island, some 35 miles wide by 100 miles long, with a population of nearly 2 1/2 million inhabitants, largely descendents of Spanish settlers and Negro slaves. The basic language is Spanish, and the basic religion of nearly 85 percent of the population is Catholicism. There is no large distinctive ethnic or racial minority, which makes itself felt in terms of the major elements of social organization. And there have been no large migrations, similar to those received by more pluralistic societies of the Caribbean, in over a century. Many Puerto Ricans leave the Island for the continental United States, but many return, and the effects of such migration has not been so evident as to leave a clear unambiguous picture as to how it may effect family and community life. The "standard" complaints about the "good old days", or the deterioration of the society and modern youth that are found in it are too similar to complaints the world over to lend any credulity to the yanqui as the sole or most important agent of social change. Many parts of Puerto Rican society are little touched by big Daddy from the north,

Mass communication media such as newspapers, radio and television emanate mostly from the capital and are island-wide in coverage and reception. Politically there is little local autonomy and hence little chance for differentiation in institutions like the police, the schools, health programs, and transportation. And in a sense, many of the forces which usually contribute to differences in social organization are minimized here: there is a single "great tradition", no communities are truly "isolated" since one can get from any part of the Island to any other in a matter of hours.

Yet despite these pressures for homgeneity, Puerto Rico is ecologically diverse, with a number of different subcultures that can be distinguished and described. We were interested in not negating the underlying cultural "oneness" of Puerto Rico, but in a way which did not distort or negate the regional variations that have been demonstrated to exist by a large body of social research over a period of nearly half a century.

The forty-eight (48) "chunks" of our sample include many which are similar to each other in distribution of intelligence test scores and in occupational profile as well as in psychological, social, and cultural patterns studied. We grouped similar "chunks" in categories of neighborhood types in order to have a classification of types of environment within which to examine the relationship between intelligence and occupational success.

Any such classification is, of course, to some extent arbitrary. Of the six categories described below, four are relatively distinct and homogeneous (peasant, plantation, slum and middle class). The remaining two (2) (urban, and mixed middle and low class) actually include a number of sub-types but are grouped together because the sub-type differences do not seem overly important compared with the difficulty we would otherwise have in analyzing data within numerous small categories.

Insofar as communities are the result of processes of growth, classification at a given moment in time may reflect different stages in a single sequence of change as well as a difference in sequences. The following brief discussion of community change processes in Puerto Rico may help place the categories we use in a time perspective which has implications for the relationship between intelligence and occupational success.

The hilly areas of Puerto Rico were lightly settled until the beginning of rapid population increase around 1800. By the middle of the 19th century small farms surrounded most urban centers, and larger holdings were being developed in the more remote areas. Most of these more remote holdings were being intensively utilized well before the end of the century. Any given mountainside or intermountain valley was likely to be owned by a relatively small number of farmer families, each surrounded by its "agregado" families - landless agricultural laborers who raised subsistence crops on plots assigned to them and worked for the farmer at a low scale of wages. Coffee, tobacco, hides, animal feed, vegetable, fruits and small animals for the market were the principal sources of income.

High birth rates with the consequent increase in density, intermarriage between farmer and "agregado" families, and sale of land with shifting family fortunes, all contributed to a subdivision of the original holdings. Relative to the rest of Puerto Rico, the poverty of the mountains had become especially noticeable through the 1930's. A continuation of previous trends, aided by land reform programs, rural-urban migration, and the increase in general prosperity has now virtually eliminated the "agregado" class. The remaining peasant population continues to grow much of its food for home consumption, but depends more heavily on outside employment than on market-crops for its cash needs. The older tradition of seasonal migration to the coast for work in canefields continues, alongside a newer tradition of seasonal migration to the continental United States for agricultural work there. Increasingly, the peasant commutes toward the city for intermittent jobs, such as contruction labor when available. Our Peasant category includes six (6) chunks of this type.

Good roads built into a peasant area begin a concentration of the former dispersed house locations. Originally located for convenience near the center of a holding (with a preference for ridges and hilltops in the rainier northern and eastern slopes and for stream beds or valleys in the drier southern slopes) houses begin to be rebuilt along the new road, as well as to develop in a cluster at the junction of the rural road with the highway to town below. If close to a city, farming tends to decline in importance and commuting to urban occupations increases. When electricity and water systems become available, middle class urban families with a preference for country life may also buy land and build larger modern houses - especially in sites with a view close to a road. As the process continues, the area, while retaining its rural character, becomes almost totally non-agricultural in occupational distribution and comes to include a sprinkling of middle class families. Three (3) chunks of this type appear in our sample and are included with others in the rurban category.

The relatively flat coastal plain and river valleys fingering in between the hills lend themselves readily to the raising of cash export crops on a large scale. The flat lands have been used for cattle grazing, coconuts, cotton and citrus fruits in the past, but the proportion devoted to sugar cane production increased continuously over more than a century. Migration to Puerto Rico of loyalist families after the wave of Latin American revolutions in the early 1800's brought capital and production skills into the sugar industry. Something of a "plantocracy" developed during this period, supported by migratory sugar workers from the hills and laborers living in nucleated workers villages. After 1900, capital from the United States and irrigation along the south coast led to another rapid expansion of sugar production and a consolidation of holdings in even larger plantations often corporation owned.

The plantocracy gradually disappeared, its end hastened by the land reform policies of the last generation. The supervisory occupations and skilled specialties of sugar cultivation and grinding have also declined in social importance as many mills have closed or consolidated and as better paid industrial jobs have become increasingly available. Over the last fifteen years sugar has become a declining industry. Some former sugar land close to the larger areas has been converted to dairy farming. But the nucleated sugar worker villages still remain, and eight (8) such chunks are included in our sample. Most of the male heads of household work in the sugar harvest during the 4 to 6 month grinding season and work during the remainder of the year at odd jobs or migrate to the continental United States for seasonal agricultural work there. A considerable number of families also live from small businesses or services patronized by their sugar worker neighbors.

As with peasant areas, plantation villages with access to urban areas tend to lose their agricultural character though still retaining a rural appearance. Some families find well paid and stable work, such as in a factory, and owners of small businesses often become more prosperous as their neighbor's income increases. Children go further in school, some even completing university. Four (4) chunks of this type appear in our sample and are classified as Rurban. "Parcela" (land reform) communities with urban work opportunities, are also of this type. Although different in origin from the peasant "rurban" they are similar in their contemporary characteristics of rural setting, low income non-agricultural occupations and a sprinkling of middle class.

Small urban centers in Puerto Rico tended to develop at stream junctions in the mountain areas and at river-road junctions or coastal landing places on the plain. A *pueblo* was the seat of its surrounding *municipio* which in turn was divided into rural *barrios*. A rural sector which was inconveniently distant from the town and which had grown in population could request reclassification as a *pueblo* with other nearby *barrios* assigned to form its *municipio*. This process of municipal mitosis was halted in the 1930's and a number of localities which might have aspired to become *pueblos* have grown in size since then,but have generally not taken on the physical shape of a town. Most frequently these are line settlements along a highway, but in some cases they are star shaped junction settlements. Occupations include commuting urban low income as well as distributive services for the rural hinterland and in some cases, food, gasoline or other sales to the highway travelers. Two (2) chunks of this type in our sample are also classified as Rurban.

All pueblos in Puerto Rico center on a plaza which usually is faced by church, town hall, government and professional offices and the more prosperous businesses. Often a main street leading by the plaza has similar characteristics. The tradition of professional business families living in a second floor residence above their office or store continues in most of these towns. The blocks immediately around the plaza and main street are often occupied by the prosperous, but stable families of small proprietors, clerical and artisan type occupations. The periphery of the town, the roadsides leading out of town and a nearby steep hillside or flood-prone stream valley are likely to be filled with the less adequate housing of families with less stable incomes, usually from unskilled labor and service occupations. In recent years many of these towns have seen the building of a small middle class housing development and a small public housing project on the outskirts of town.

Nine (9) of our chunks came from towns of this sort. Of these, five (5) are composed almost entirely of lower income families and are classified in that group. Four (4) chunks, however, include some number of middle and lower middle class families as well. These are classified as "Mixed Middle-Lower". Actually this classification is more a junction of the size of the "chunk" and the segmenting methodology than of coherent neighborhood characteristics. In small towns the number of middle class families is usually too small to have formed wholly middle class chunks.

The types of communities described to this point have remained relatively stable in population over the past two or three generations. Given the high birth rate however, this stability implies a substantial migration towards the cities. Large cities in Puerto Rico and especially the San Juan Metropolitan area have grown rapidly in size. Originally larger and more segregated in neighborhood composition, they have become even more so in the present process of growth.

Some former middle class residential neighborhoods have deteriorated in housing quality and in prestige. Although middle class families do remain (especially older long-time residents) their income level may have declined and boarders, split apartments and smaller houses in the back of subdivided lots out-number the older residents. The three (3) such chunks in our sample is classified "Mixed Middle Lower."

Frequently the older middle class areas remain relatively high in prestige with new, more modern houses built on the occasional vacant lot, here and there an old house torn down for an apartment building or condominium, sometimes an old house renovated, but more often just well preserved. The one chunk of this type in our sample is classified as "Middle Upper."

Some stable working class areas of the artisan, small proprietor, clerical, and sales type also existed in the larger cities and retain somewhat the same character today. None of our chunks are wholly of this type, but such portions of this type as occur are to be found in chunks classified in Mixed Middle Lower.

Unstable working class or "slum" areas were originally located in the large cities, as in the small town, on less desirable land on the urban periphery, on steep or swampy land, or close to a noxious environment such as industrial or food processing institutions. As the city expanded some of these areas become more valuable, or less noxious, or simply more visible, and slum clearance projects have removed them. Others have been improved with electricity, paved streets, water and sewage lines and access to public transportation. These improvements plus rising income levels, lead to a continuing modification and improvement of housing and expansion and modernizing of neighborhood businesses. The relative prosperity of some families as well as the generally higher levels of education and occupation led us to classify these two (2) chunks together with the historically different, but currently similar deteriorated middle class areas and small town plaza neighborhoods as "Mixed Middle Lower."

Most slum areas in Puerto Rico are less than 20 years old. Despite continuing slum clearance programs the total slum area remains more or less constant. Residents of these areas include families who have moved over from another recently cleared slum as well as lately arrived rural-urban imigrants. Occupations tend to concentrate in the unskilled or semi-skilled and service trades.

Unemployment of male heads of households is not high, but a substantial proportion of households are without a male head. Six (6) chunks of this type appear in our sample and they, as well as one chunk of public housing are classified simply as "Urban Lower,"

Perhaps the most striking change in the pysical appearance of the large cities, and the San Juan metropolitan area in particular are the new housing tract developments. Home owners include many who have moved in directly from rural areas or small towns, others who have moved up from slums or housing projects or over from older middle class or stable working class areas. A majority of residents however, are young socially mobile families of substantially higher educational and income levels than their parents. Such developments are rather homogeneous in income level of residents. Approximately one third of the tract families may be classified as middle-middle or upper middle professional, technical and managerial. The remaining two thirds are lower middle - clerical and sales, small proprietors, skilled labor, etc. Four (4) such chunks in our sample are classified as "Middle and Upper."

These classification are summarized in the Table below:

Table G-1

	Peasant	Plantation	Rurban	Urban Lower	Mixed Middle & Lower	Middle & Upper
Rural Mountain	6	-	3	-	-	-
Rural Plains & Valleys	-	8	4	-	-	-
Small towns & Rural Hamlets	-	-	2	5	4	-
Large Cities	-	-	-	7	5	5
TOTAL	6	8	9	12	9	5

Composite description of each of the four distinct above community types follows. A separate description of Rurban and the Mixed Middle & Lower have not been given in any detail since at the level of visual and ecological descriptions they represent a mixture of the other four types to be described. Socio-psychological variations are of functional importance and can be demonstrated to exist on some level, but are not included in the aims of this section of the report.

Peasant:

Along the coast of Puerto Rico are found most of its larger cities. But through the mountainous interior are a scattering of towns, most commonly at a river junction. Here and there along the coast one finds a small fishing village. In a number of places, especially on the north coast, are coconut groves. A little further inland, but still on the coastal plain, are the cane fields and cattle grazing areas. The mountainous center may be divided into three zones. The eastern zone is heavily forested and sparsely populated. The central mountains are heavily settled by subsistence farmers producing tobacco as a cash crop. In the western zone, coffee is king. The concept of peasantry is subject to different definitions, but among these definitions the main agreed upon distinguishing characteristics all seem to include: tillers of the soil in effective control of the land, who produce primarily for subsistence and not reinvestment, who form a part of a larger society and thus constitute part societies with subcultures.

Peasant communities tend to be relatively isolated, dispersed, mountainous communities, numbering some 150 endogamously related families. The land is generally owned almost entirely by the residents who are subsistence farmers, deriving a major part of their sustenance from the land.

Whereas there is some variability in house type, most of the houses are of weed with a zinc roof, are quite small, and both living room, bedroom and lean-to kitchen may have average dimensions of 15' x 15'. They typically have one or two rooms, the living being furnished by a home-made table, a home-made bench and possibly not much else. Some people do have refrigerators, in those areas with electricity, and some have china cabinets, and some have radios, but few have all of these things combined.

Farinaceous crops, legumes and small animals raised on the farm are the basic economic goods, added to from the approximately $600 average annual family cash income.

These communities tend to be basically homogenous, one-class communities. There are, of course, differences in wealth, but these differences do not separate the vecinos (neighbors) into sub-groups, since substantially, anyone's daughter can marry anyone's son.

These areas tend to be marked by generations of endogamous intermarriages which have led to multiple kin connections between families. A few surnames, and combinations of surnames cover most of the families in a given barrio. The interest of these people is frequently centered on themselves, their children, their houses and their farms. They are, of course, aware of the world outside, but their significant others live on ridge or in their valley.

Most of the women stay in their houses and are not seen walking around the area unless they have been down to town for some reason, most likely to the medical center or to some special event, and are on the path on their way home. Otherwise, one normally sees men, boys, and young girls walking around.

Many peasant wives wear their hair long and uncurled, frequently in a pony tail at times reaching almost to their waists or drawn up in a bun at the back of their neck. They often wear plain undecorated cotton dresses. A fair number appear to be older than the chronological age that they report. There may be 5 or 6 children in the house, and if it is your first visit some of them may scamper to hide behind their mother's skirt or cling to her as you enter.

The children will not speak, and the woman will be slow to answer as well. There is often great reticence in talking with strangers, but some communication is always possible. It is in this group, especially for the more isolated ones among them, that middle class observers often describe as the true rustic, or jíbaro.

Life begins very early in the morning in most peasant households, at 4:30 or 5:00 A. M; and not too long after dark, by 9:00 P. M; most families are already in bed.

Households are strictly nuclear and neolocal, but there is a patri-emphasis in filiation backed up by male dominance which tends to cut the wife off from her own kinsmen and place her more completely under the control of her husband. Her mother sees the marriage of her children as a losing of daughters, not a gaining of sons. Although couples often elope without ceremony, a church marriage follows soon after. And divorce is not only frowned upon, but is almost non-existent in practice.

The Rural Plantation:

The rural plantation or sugar worker's communities tend to be a cluster of landless agricultural sugar cane workers households. Frequently there are a number of little pathways and streets which connect houses and routes that different people travel by foot. Some of these paths tend to be somewhat dendritic in nature and at times only large enough for foot, bicycle or animal transportation. Others are regular and almost as if a grill had been laid to guide their construction. Invariably many of the streets as such are dirt, and street lights are scarce,

The houses are grouped along these paths and are almost always of wood, or wood and palm, and occasionally wood and cement. Most of the houses are only 2 or 3 rooms ranging from about 250-300 sq.ft. in overall size.

Most of the people wear cotton clothes. The men frequently wear pressed sport shirts and slacks or khaki trousers. If they are just sitting around the house, they may only wear an undershirt or no shirt at all. Most of the men wear shoes most of the time. Women are less well-dressed unless they are "going out." More frequently one will see a woman with a heavily soiled dress or a torn dress and underwear, and no shoes. They are in a more general state of disrepair than men. Children in a sense are somewhat extreme in both directions, more frequently they are totally unshod, tattered,and unkempt. This is often true even when the particular house from which they come is relatively clean.

One of the things which might strike the visitor to one of these areas is the atmosphere of life and movement that characterize many slums and other proletarian communities. People are ever-visible, sounds are forever with you, and smells of foods, latrines and people remind you that you are not alone. Children play happily up and down the narrow paths in the improverished courtyards and in and out of each other's houses, although more outside than inside. Radios, televisions and jukeboxes can be heard, and not infrequently one can see somebody dancing either in one of the front rooms or in front of the house. Children, women and, in the poolroom, even boys, will spontaneously move to the music.

> "The child in Poyal becomes accustomed to noise and movement around him to an even greater extent than the Manicaboa child, largely because of the frequent visiting between neighbors. His sleep is not considered sacred, and he is expected to fall asleep with the radio playing, lights lit, and the sound of voices around him. The child in Poyal, like the child in Manicaboa, will never know what privacy is in the Continental American sense. Houses do not provide privacy, and privacy is not valued; instead, a person who seeks privacy is considered to have strange tastes." 1/

There are electric lights and light lines in many of these areas although some of the poorest families do not have electricity. There are a number of televisions sets and ubiquitous radios, all competing with each other in terms of volume. Sometimes one can hear the voices of humans competing with the combo on radio and television.

Houses have more store-bought and less homemade furniture in these areas. There is also more evidence of appliances, televisions and other electrical equipment. There is a greater amount of material comforts in general.

In many of the houses, whether or not the man is present, the woman or wife who is in the house will talk to strangers without much reticence or any apparent discomfort or need to refer to her husband. When one is talking with them, they look at one directly and answer back, and do not show the kind of hesitance at interacting with total strangers which is seen on entering the peasant home. This woman will tell you, if you ask her, that the man should be respected and head of the household. However, when questioned further, she really looks for a rough and ready equality between the sexes. No woman feels that an absolute king is the kind of person a husband should be, even put in such absolute terms, the peasant women still feel that a man should have the ultimate authority in the house. Not only do women not feel that men should have the ultimate authority in the house, but if expressed in extreme form that they feel he should share with women. Men also feel this way and when asked should the man be the complete boss or should he share equally with his wife, most men say he should share with his wife.

1/ Kathleen Wolf, Growing up and its price in three Puerto Rican subcultures. In Eugenio Fernández-Méndez (ed.), Portrait of a Society. University of Puerto Rico, 1956, Pages 211-246.

During the five months harvest period most males of the community work in the cane fields or in the sugar mill. The seven months "dead season", (tiempo muerto), provide work for a few on the plantation, but the rest must follow a trade if they have one, pick up odd jobs, or migrate to the United States usually to work as agricultural laborers. Annual income frequently average about $1,000, houses are larger than in a peasant area, and radios and television sets are more common. There is movement and life in the community -- people, sounds and smells fill the houses and punctuate the streets, paths and stores.

The young people in plantation communities usually set up in independent house near the bride's mother, but may move in with her parents if it is not inconvenient. The bond between spouses never becomes as strong as their tie to their own consanguineal kin. One third of the marriages are often common-law, and the average resident may expect to have two or more mates during his or her lifetime. When a woman's children adolescence, she becomes increasingly independent of her husband who may even move into another house to sleep, returning to his "wife's house" for his meals. As the children marry, daughters are likely to bring their mates to live with or near the mother, and sons will continue to visit and send remittances to her.

The Urban Lower:

Most slums in Puerto Rico, are not deteriorated districts in the central city, but rather a collection of houses built up on marginal land of unclear title. Left to themselves, such slums tend to improve, rather that deteriorate in housing quality over the years. Men work in the unskilled, semi-skilled and service occupations of the city. The average annual family income, which is frequently of slightly under $2,000, pays for a wooden or concrete block house some 600 square feet in area and a wide range of furniture and appliances compared to both of the rural communities just described. One sees only one third of the houses by walking along the paved streets of most slums. To disappear into some alleyway is to open up a previously closed world of jumbled shacks, refuse and noxious odors. However, houses are often quite clean, considering the crowded conditions and the scarcity of government services available in these areas.

There are no open fields, the houses are closely packed with few open spaces. Children play in the narrow alleyways and crowded streets. Slums are not as violent as many middle class people believe, but fighting is not uncommon. The residents themselves say that they live in a "bad" neighborhood among "bad" neighbors and feel themselves exposed to a hostile and hard to control world.

A walk through such a neighborhood gives a feeling of some of the diversity of sights. As a newcomer walks through he many be impressed with the diversity in both cleanliness and dress of the people. A man, with a white shirt neatly and recently pressed, trousers showing no great signs of wear and tear, shined shoes, combed and brilliantined hair, who as he walks down the street towards the exit, may remove a white handkerchief, on which some men's cologne has been put, sniff it and pat the perspiration from his hands, and return it to his pocket. He may also remove a small pocket comb from one of his rear pockets, and comb his hair as he walks down the hilly road. Not too many feet away from him may stand his son. If the boy is not accompanying him, he may wear no shoes, no shirt, no pants, and if he is under four, perhaps no clothes at all. If he has been playing and sitting on the ground, his body is likely to be quite soiled compared to his nearly immaculate father.

As you continue thru the barrio you may pass girls in brightly colored, full-skirted, or conversely very tight, cotton dresses. Some girls will be wearing heels and some sandals. Hair styles very. Many wear it shoulder length or longer, but a few wear it cut quite short. Unless they are mourning, or are protestante (Protestant) they will most likely be wearing make-up eyebrow pencil, eye liner, eye shadow, lipstick, powder, rouge, and jewelry consisting of earings, bracelets, rings, etc.

People who are not on their way out of the barrio will not be dressed up. Women will not have on make-up, may have their hair in rollers or uncombed, and will be dressed in simple cotton dresses which may or may not be torn or soiled. Most women wear shoes, but it is not uncommon to see women standing around talking and see some without shoes.

Not too far away there is either a juke box or a radio playing, and from time to time one will hear the scream of a crying infant or child, or the gruff interchange of a quarreling man and his woman. All these sounds, laughter, tears, and gruff words -- continueously intermingle, and there are very few hours when the slum is silent.

Many of the people here live a relatively poverty stricken existence. Yet they feel that poverty is no justification for being unhospitable or unfriendly.

Households show a matrifocal emphasis, but differ in detail from that of the rural plantation. The proportion of female-headed household is higher, but few of them are of the three generational grandmother type. Common law marriage is often as frequent as it is in the plantation community, but the tie of each spouse with his own consanguineal family is somewhat weaker. Even so, the consanguineal tie is stronger than the spousal tie and divorce is relatively common.

The Urban Middle and Upper:

The middle class, whether upper middle or lower middle, are alike in certain kinds of socio-economic characteristics which separate them all from the lower working class or the really rustic agricultural workers, even in those areas of close geographic proximity.

Approximately, one third of the population of San Juan lives in middle class suburbs built up since World War II. Occupations range from skilled labor and clerical in housing developments costing $10,000 or under to professional and business managers in homes of the $30,000 and up category.

Houses are decorative and spaced. Streets are unlittered and quiet. Floor plans, furnishings an appliances would not look out of place in the magazine House Beautiful.

At certain hours of the day one could pass through one of these areas without seeing more than one or two persons on the street, and without hearing any loud sounds of life. Voices do not ring out and the listening pedestrian can hear conversations, only early in themorning before 7, or late in the evening, after 10:30 or 11:00 P. M. Not that these people never make noise or can never be heard by their neighbors. Its just that a kind of tranquility permeates the area much more so than the urban slum that we have just visited. Once again, one gets the feeling of space, tranquility and fresh air reminiscent of the peasant communities.

Between 6:30 and 7:00 A. M., the sun not fully out yet, activity is already apparent and in full swing, As you go through the area, you hear voices and you see people in their houses, lights in the bathroom, people moving around, noises coming from the kitchen.

Walking through the area at this hour most of the cars can still be seen in the cartport or out in front of the houses. There are some cars going back and forth and sometimes one hears the swish, swish, swish, swish, of a washing machine or can see some diapers or men's shirts or sheets floating in the breeze

As one walks up and down the neat streets in front of these fashionable homes, voices of children can sometimes be heard calling back and forth to each other disagreeing about something and occasional tears can be heard following a "What's the matter?" or preceded by a "Don't touch that. Didn't I tell you," or "What do you think this is anyway. I have to do such-and-such." By 8:30 most of the people will be leaving the area - some by car and others to the bus stop. But if it is a Sunday, this will not be the case and one will see more men, more cars in the carports, men painting a door or messing around in the yard.

A few of the homes show the sparsely, or not too expensively furnished interior of the family who are temporarily "house poor". In the typical house, however, there is a living room with coffee table, frequently a hi-fi, radio and television. In addition to the main set, others may be found in a family room and one or more of the bedrooms. Refrigerators and freezers, washing machines and dryers, extension telephones and one or more cars supplement the living room, dining kitchen, several bedrooms, two or more bathrooms, terraces, balconies, patios, storage and laundry rooms and carports or garages of the typical home in this neighborhood.

Clothes are very important in this community and one might suspect that the higher the income, the more the clothes. This is not quantitatively true, however. Girls in the slums have many more pieces of clothing than their middle class counterparts. One of the surprising things about the clothes of the girls in the slums is the small fraction of it which is active. They are kept however, almost like capital investments. In the middle class area, girls certainly could change three or four times a day if they wanted to. But slum girls could change even more than that. The main difference seems to be rather the basic quality, durability, style or cost of the item. A slum girl may own seven (7) pairs of pants and favor one or two of them. A middle class girl may own only three (3) or four (4) but what was paid for the 3 or 4 surpassed what the slum girl may have paid for her seven (7). As a matter of fact, middle class girls can pay as much as $20 for a single pair of slacks as opposed to the $2.00 or $3.00 that her counterpart might pay. The middle class also sheds clothes. After even a $20 pair of pants has been worn for a while they will be given away to the servants in the household or to poorer relatives so that the middle class girl does not guild up as bulky a wardrobe. When any things are felt to have lost their interest and are not likely to be used, they are shed.

The women in these houses tend to be a bit taller than their peasant counterparts and weigh more on the average, frequently 130, 140 or 150 pounds. They almost always have shoes or slippers. The clothes that they are wearing are almost always cleaned, freshly washed and ironed, even if they are thought to be casual clothes and on the whole, it is a whiter population than that found the rural proletarian communities. There are few black people at the extreme end of the color continuum even though there are some people who are light brownish in complexion whose hair was not completely straight. The women in this area are more in touch with the outside world and the foreighn world. Most read El Mundo and some read the English paper.

A few of them get El Imparcial, although frequently they do not want to admit it since it is thought of as the lower class paper. They read magazines like Good Housekeeping, American Home Journal, Times, Sports Illustrated, House & Garden, Life, Better Homes & Gardens, Parent and the Spanish edition of Readers Digest as well as Vanidades and Bohemia. They watch television and on it see movies, the Ford Show, Bonanza, Three Stooges in the afternoon for the kids, Dr. Kildare, (all dubbed in) and other national TV programs. The upper middle class mother is active in neighborhood meetings, chapel meetings of the church, professional meetings, and tea for the wifes of whatever group their husbands belong to. Hence they are involved in a greater circle of activity of a formal nature and more people are included in their network of interaction than was true of women in our other communities. Nevertheless, women do feel bored and lonely at times. However, relative the women in this neighborhood even if they do not go out to work or seek outside activities, are not isolated.

Nearly half of the women probably work and almost all children attend private school when younger and go to the University later.

Widowed parents and domestic servants may reside with the family, but otherwise its nuclear and neo-local nature is uncontested. Visiting and other relationships with the family of orientation continue to be reinforced throughout married life, but are largely bi-lateral, and do not preceed the spousal tie in loyalty. Marriage is normally ceremonial and involves a connection between the families of bride and groom. The husband acquires certain legal rights over his wife, and certain responsibilities for her and their mutual offspring who take his surname. One the alliance is made it is supposed to be permanent and divorce is frowned upon, even though it occasionally occurs.

These then, are the four main subcultural types. The rural peasantry with its dispersed subsistence farmers; the plantation -- landless sugar workers in a nucleated settlement pattern; the urban slum, poor and dense; and the middle class suburb.

The remaining two subcultures are combinations of these four. The rurban community is essentially a rural slum. The setting is rural, but social relations and the occupational structure are lower class. The mixed middle and lower are a combination of the middle and lower communities already described.